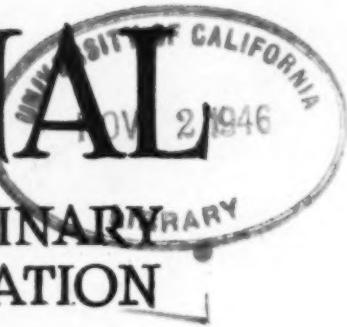


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JOURNAL

OF THE

AMERICAN VETERINARY MEDICAL ASSOCIATION



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Volume CIX NOVEMBER 1946 Number 836

THE BASIC CHAPTER

On World Progress Is "Man and His Animals"

In the pursuit of its errand, veterinary medicine has had to endure the disillusion about man and his animals in the reconversion of the war-torn nations—about the theory of reducing the population of food-producing animals to relieve suffering among the under-nourished millions.

Diminishing the tonnage of animal-food products to save livestock feeds for human subsistence is a perilous illusion, mistaken for charity, and a step toward the level of backward people of which the past and the present is strewn with tragic examples—nations decline and vanish with their farm animals.

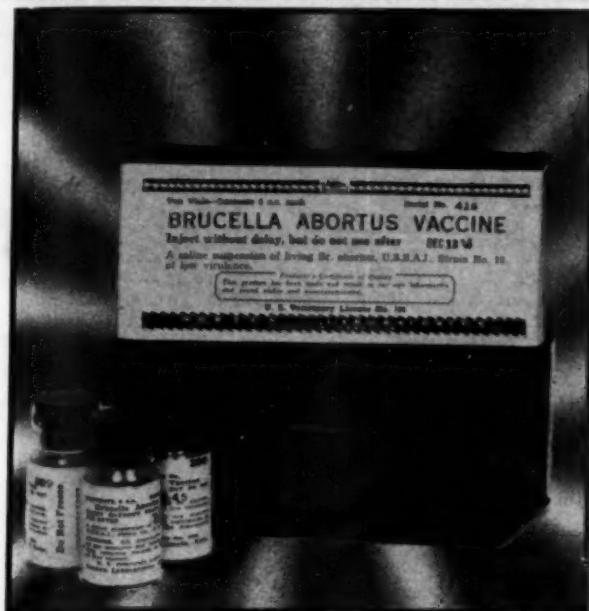
MOVEMENTS TO TRANSFORM HUMAN BEINGS INTO HERBIVOROUS MAMMALS VIOLATE BOTH THE PRIMITIVE AND SCIENTIFIC PRINCIPLES OF MENTAL AND PHYSICAL DEVELOPMENT, STUNT THE GROWTH OF THE INDUSTRIAL ARTS, AND DIMINISH THE YIELD OF THE ARABLE LAND.

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NO. 836

I Am Sticking with Livestock

HOWARD E. BABCOCK

Ithaca, New York

Dean Hagan, Dr. Simms, Ladies and Gentlemen: I accepted this engagement with a peculiar sense of responsibility and opportunity. I live on the fringe of the great company of scholars which is Cornell University. When I first came to that community, one of the first men I met was Dr. V. A. Moore. He took a fatherly interest in me. Through him, I came to have great respect for the integrity of the veterinary profession. Later, through Dr. Moore, and through reading, I came to admire the work of Dr. Mohler. I am glad he is here tonight so that I can pay a tribute to him. He does not know me, but we all know what he has done for America's livestock industry and honor him for it.

When Dean Hagan suggested I come here, I accepted the invitation with a sense of responsibility, as I have said, and because of that I have written out my speech. It will take me two minutes to read it, and after that I expect to spend twenty minutes telling you what I read.

The science of human nutrition now emerging on its own will have a great impact on veterinary medicine. The contents of the modern household refrigerator are the best measures of a nation's nutritional standard. You can try that out when you get home. Look in your refrigerator and see how well the family is eating. The livestock population of this country is the best and only practical regulator of the quality

of its diet. I want to repeat this. The livestock population of this country is the best and only practical regulator of the quality of its diet. The United States does not possess sufficient arable land, farm machinery, or farm workers to produce the forage and cereals needed to provide an optimum diet for 140 million people.

This reminds me of the old maid who was in her upstairs bedroom and heard someone trying to get into the place. Rushing to the telephone, she called the fire department, and said, "There's a man trying to get into my room."

The fire chief replied, "Madam, you have the wrong place. You want to call the police."

"Oh, no I don't either," said the old maid, "his ladder is too short."

The human stomach is a great common denominator in the life of any country. I have yet to find an individual who is worth anything who didn't have one.

What shall go into it can be a common objective of labor, industry, agriculture, and the professions. Among the professions, doctors of veterinary medicine are in the key position. I say this despite the fact that I have a doctor in my own household. I am tempted to tell a story on the doctor, but I'm afraid it is an old one. One of our own farmers called him one night in the middle of the night and wanted him to come over. He said, "How much will it be?"

The doctor said, "Two dollars."

And the farmer said, "Hell, I can get a Cornell veterinarian for five."

This country badly needs some construc-

Presented at the banquet session of the eighty-third annual meeting of the American Veterinary Medical Association, Boston, August 18-22, 1946. Mr. Babcock is chairman of the board of trustees of Cornell University and a farmer and livestock producer of many years standing.

tive program. Upgrading its diet is offered as one such program.

For the rest of my speech, the explanatory part, I want to use props, but first I want to get rid of the stigma of being a dirt farmer which the Dean fastened on me. The only honest fellow I ever heard of who claimed to be a dean—I mean, a dirt farmer—was a southern gentleman down in Richmond. He was attending a meeting at which a number of politicians had been telling about being born on a farm, being dirt farmers, and so on. He arose and said, "Gentlemen, I'm a dirt farmer, too, but, by God, I have always kept a nigger between me and the dirt!"

With apologies to Joseph and Henry Wallace, I want to present my ever-normal re-



Mr. Babcock (left) and Chester C. Davis, former War Food Administrator, shown with the ever-normal refrigerator.

frigerator. (A dummy refrigerator was introduced at this point.) I use this refrigerator as a symbol of what I am going to talk about for two reasons. I do not believe any country can have a good diet unless the agricultural and the industrial arts of the country develop simultaneously. You cannot have a good diet in any country in the world unless you have low-temperature food storage. So, when I sought some

symbol which would express the joint accomplishments of American farmers and industry, I chose the household refrigerator. I am going to open it now and show you some of the things which are in it.

You remember my first point was that the science of human nutrition is going to have great impact on the veterinary medical profession. It is going to have great impact on our economy and on the health and energy of our people. Twenty-five years ago when I became interested in animal nutrition, I was able to go to colleges and experiment stations and get specifications for optimum feeding of chickens, cows, and hogs, but there was very little known about feeding human beings. Then for ten or fifteen years, about all we had in the way of leadership in human nutrition came out of colleges of home economics and out of the women's pages in magazines, and whatever truth or leadership there was in it was pretty well clouded and covered up in calories, vitamins, proteins, and carbohydrates, and so many details that we could not get the idea of what they were talking about.

Of late, there have sprung up all over the country top-flight scientists in human nutrition. I went to some a few years ago and said I would like to get the same sort of specifications for feeding human beings which I got from Dr. Maynard and Professor Savage twenty-five years ago for animals. One of the professors lifted a great load off my shoulders. "That's simple," he said. "Except for sugar, the food that people like best is the best for them."

I will tell you now how I then proceeded to find out what people liked best. I began to take guests to dinner and tell them to order just what they wanted. You can test this yourself. Ninety-nine of a hundred people of this or any other country, if they have any hope of getting the order filled, will order a meal out of a refrigerator. They will order the animal products—milk, meat, and eggs, and the fresh fruits and vegetables or their preserved equivalent, and work cereals in as a sort of carrier. All the people in the world want to eat such meals. Most of them cannot do so. So I say that the optimum human diet, very fortunately, is the meal we like best, if you will make the one possible exception of sugar. We like best meals which are based

on animal products and fresh fruits and vegetables. The first time I said that, one of the officials of General Foods said, "How about Swansdown flour?" I told him I never saw anybody who cared a thing for it until it was mixed with an egg, and then it became angel food.

I talked with vegetable growers, and they said I was not fair to the potato. I said I never saw anything move a potato like meat gravy or butter. You come right down through your menus, your own food desires, and you will not find any food that you like best which is not touched up for palatability with animal products such as milks, eggs, cheese, and butter.

Here is what I see in my refrigerator. I see one of the basic considerations of the American economy. I see chickens, cows, steers, hogs, sheep, also fruits and vegetables, but mainly I see livestock.

As I have thought more and more about diet, I have realized this is the way people of the world live. In China, they eat directly from the land—cereals, carbohydrates, beans for protein, fruits and vegetables in season. What forage they have they are likely to feed to work animals. They may get a little ahead for hogs and chickens but they have no great hopes for an animal population in the country. They just cannot support it.

In this country, we work gas engines on the land. We have a great surplus production of forage, and we produce more cereals than we want to eat directly or can eat directly. So a livestock population becomes a sort of cushion between us and the land. Through it we pass the forage which we cannot use anyway, except perhaps in the shape of a little spinach and cereals, which we do not really need or want to eat. The animals condense and upgrade this tonnage and produce the desirable animal foods which make our diet palatable and supply optimum nutrition.

Left to ourselves with a free market in a free economy, we always adjust that animal population up and down to our food supply. When we have a short cereal crop, we bid more for wheat than the hog owner can bid for it, until we have all the wheat we want for human consumption, and the hogs get the rest. When we move into a managed economy, however, prices are all balled up, and we may have the situa-

tion, as we have had in recent months, where a hog legally can pay more for wheat than you and I can. We then get Truman bread because we run into the problem of using hog feed for bread instead of wheat.

I am terribly depressed by the recent action of the Decontrol Board in reestablishing price ceilings on meat. I think we have delayed indefinitely automatic stabilization of the quality of our food supply by letting the free market work on our animal population. It should expand when we have big crops and be killed off and eaten during periods of scarcity, war, and the like. I think it probably will be written down in history as one of the great economic crimes of all time, namely, when we started to manage our animal population by bureaucratic decree. It just cannot be done.

Actually, what you do in any country that has a livestock population is to bid against the hog all the time for what you want to eat in the way of cereal; then you let him have his, and after he is through with it, you eat him. This is our economy of food. It is the way we establish the quality of our diet.

When I look in the refrigerator, then, I see more than the roast and the bottle of milk and the butter. I see animal populations. I have had this refrigerator built according to standard specifications but when I came to put it in shape for you I told the artists, "The veterinarians are in that refrigerator somewhere," because the veterinary profession and our animal population are interdependent. If we have a big animal population, there is a lot of business for the veterinarians. When the animal population declines, the veterinarians have to get government jobs.

I said to the artist, "I wish you would put some veterinarians in the refrigerator for me." Then I had to go away, and he put them in according to his own ideas. I did not see them until I got back. I make that explanation because I want to show you now how others see you. This is the artist's conception of the veterinary profession. There is only one thing that seems to ring true. I am sure some of the clinic boys that come to my farm year after year look at a cow just like that.

We do not keep hogs, so I don't know whether this is the way you nurse them

or not. But seriously—and here I pay you a sincere tribute—the dietary standard of this country is as high as it is today, and has the prospect of continuing to be among the highest in the world, largely because of the contribution of one profession, the profession which is represented here. I am terribly proud of you because of the standards you set, the integrity you have shown, and the progress in your science over the years I have been keeping livestock and you have been taking care of it for me.

I don't believe any woman or any other consumer looking into a household refrigerator ever saw a veterinarian in it before, but I tell you that we will not have normal refrigerators, refrigerators full of foods out of which we like best to build our meals, unless your profession is continued strong and virile, and with high standards. As Dean Hagan knows, any time Cornell Veterinary College wants more money, I am ready to go to Albany to get it.

You see, we have the food, we have the livestock, we have the veterinarians who keep the livestock healthy, but we have a lot more in this refrigerator. Here I am going to bring out a fact that will probably be new to you, one which to my mind is one of the most important economic facts in our whole world economy. Of course I don't have to spell out to you that steak and milk and butter got into the refrigerator because small grain and hay and corn and forage was passed through animals. You know how it passes through better than I do. When it doesn't pass through, I usually call one of you.

Here is an economic fact, and if you do not remember anything else I say here, I hope you will carry this back to all the states you have been boasting of in song. This year we are producing the greatest crops of small grain and corn that we have grown in all history. We have very high production of hay and forage. Converted to corn equivalent, we may have between 7 and 8 billion bushels of grain. That is converting the forage and other grains into corn equivalent.

My Cornell economists tell me, however, that if every one of 140 million people—men, women, and children—were to eat the amount of animal products such as milk, meat, etc., in their meals that they ought to eat for optimum nutrition, it would require a production of the equivalent of

around 12 billion bushels of corn in this country.

In other words, in one of our great crop years, we are perhaps 40 to 50 per cent short of the production of forage and grain for livestock we would need to produce if all our people were as well fed as most of the chickens in New York State.

How can we as a country look forward to acreage control, plowing under crops, quotas, an ever-normal granary with grain taken out of circulation, in face of such devastating problems as the one I have just stated? I am not the least bit afraid of this statement. I can prove it. In fact, it won't be challenged by people who know the production of the country well. I am going to repeat it.

This country cannot produce enough grass, and hay, and small grain and corn to support enough cows and hogs and steers and sheep and hens to fill the refrigerators of all the families of the United States as well as they should be filled.

I hope you won't forget this because you men and women are public citizens and, within a few months, we are going to be hearing a cry of surpluses. If we are not careful we are going again into a tailspin of noneconomic legislation which will result in lowering the standards of living and the nutrition of the American people. There is, however, a good deal more in a refrigerator than the food you see and the animals and the veterinarians and the small grain and corn and grass.

There is in the American refrigerator nearly half of all the industry and all the jobs in America. Food handling and production at the present level of the American dollar accounts for better than 40 per cent of all gainfully employed people; that is for farmers, veterinarians, people who manufacture refrigerators, compressors, insulation, food processors and handlers, and the like.

Now allow me one simple illustration. The simplest diet in the world is beans and rice, or beans and wheat. If you want to improve that a little you germinate the beans. There is no industry in a plate of boiled beans. There is no industry in a bowl of boiled wheat. But you feed oats to a cow and milk a cow, separate the milk, make ice cream, store it, and transport it, and you have released from those oats an ever-increasing chain of industrial activity.

Nearly half of the entire industrial activity of this country is directly tied to what is in the refrigerator, to the quality of our diet. I am making this point as strongly as I can, because whenever I make this speech some economist who has thought the thing half through says, "That is all fine. The American people would like a diet like that, but how can they pay for it?"

I'll tell you this: We cannot pay for good meals if the grade of our whole diet is going down toward bread and beans. As the diet is upgraded in any country, its cost is partially self-liquidating in the industry and jobs it creates.

Furthermore, the science of nutrition is emerging. We have at Cornell a School of Nutrition. This fall, human nutrition will be taught in every school in the great New York State school system. That hits one-tenth of the kids in the United States. It won't take very hard this year, but a few years from now those kids are going to be looking at their meals critically. They will be taught that the kind of meals they ought to eat are based on animal products, supplemented by fresh fruits and vegetables or their processed equivalent. We are putting in a big food-processing laboratory at Geneva. Education in human nutrition is just starting. In five or ten years, it is going to change the budget formula in the American home, and we are going to see more money go into that budget for food, because the kids themselves will be demanding it. This, to my mind, is one of the most significant economic facts in America. It is significant because it hits agriculture, it hits industry, it hits your profession. Let me repeat this. The grade of the diet in a country correlates directly with industrial activity and jobs.

Another simple illustration: How much oil and rubber do we use taking wheat off a farm once a year, an annual crop? Compare it with the oil and rubber we use when we take milk from a farm every day to market? These illustrations can go on and on.

This is not all there is in the refrigerator. You're going to be seeing things when you get back home and look into your own refrigerator. In a refrigerator is health and energy and human satisfaction. You know that; I don't have to prove it

to you. You go home to a bare refrigerator and a shelf of ready cooked cereals and a bit of cold potato—how much health and energy and human satisfaction is there for you? Not a whole lot.

I have been active in farm organizations for thirty years. I have been a farmer all that time. The Dean was trying to cover up his own age a while ago. He spoke about my being in G.L.F. ten years. Oh, Lord, I was there twenty-five years. I have been a Cornell trustee for seventeen. For years I have been in the game of producing and handling food.

Years ago I decided that, before I died, if I had the time, I was going to orient myself. I did not expect to find out where I was going, but I did want to see where I had been. This is my rather judicial conclusion on my activity and Hagan's activity and Dr. Mohler's activity, and Dr. Simm's, and the rest of you ladies and gentlemen: We have been raising food, processing food, marketing, doctoring animals, fertilizing the soil, with just one overall objective: to feed the American people so they may have a maximum of health, energy, and social and human satisfaction.

This is the way we all point up. It is the way your profession points up. It is the way my farm points up. It is the way the land-grant colleges of agriculture and home economics points up. It is the way the refrigerator industry points up. It is the way the cereal industry points up and the cattle industry. We have not done too good a job. I have been for twenty-five or thirty years in animal and poultry nutrition, and there we have done a much better job than we have in human nutrition. You can go to any schoolhouse, let the kids out on the lawn, and find a much higher percentage of nutritional diseases among them than you will find in the next hen house down the road. That is a sad fact, but it is true.

So let's orient ourselves. Let's aim harder at a worth-while objective. There are two good reasons why we must do this in America today. I intended to bring a quotation from President Roosevelt in today's *Collier's*, a quotation by Madam Perkins who has him written up in that magazine. (Elliott has written him up in *Look*. There is a grand harvest for the people who knew Roosevelt for a while.) In this article, Roosevelt was quoted as saying that,

until you got food into the Near East, it would be a powder keg, and I agree with that statement. You cannot build a democracy on hungry people. You cannot build institutions like schools and churches, nor have freedom of religion. You cannot build universities, and the kind of life that enables you to be here tonight, with people who are suffering from malnutrition.

The world is skirting that situation today. We have skirted it here. I can see us, in the face of the fact that we haven't anywhere near the optimum nutrition in this country, starting surplus control programs with the destruction of food in six months. I mean it. We will not have the democracy we want, the republican form of government we like, if we have hungry and dissatisfied people.

Again there are rumblings of war. We have won two wars now because, among other things, we could out-eat the rest of the world. There is no war reserve equal to a large livestock population, because, come war, what do we do? We kill off some of the hogs and we eat the hogs. We reduce our animal population and eat it, then eat the animal food direct. There is

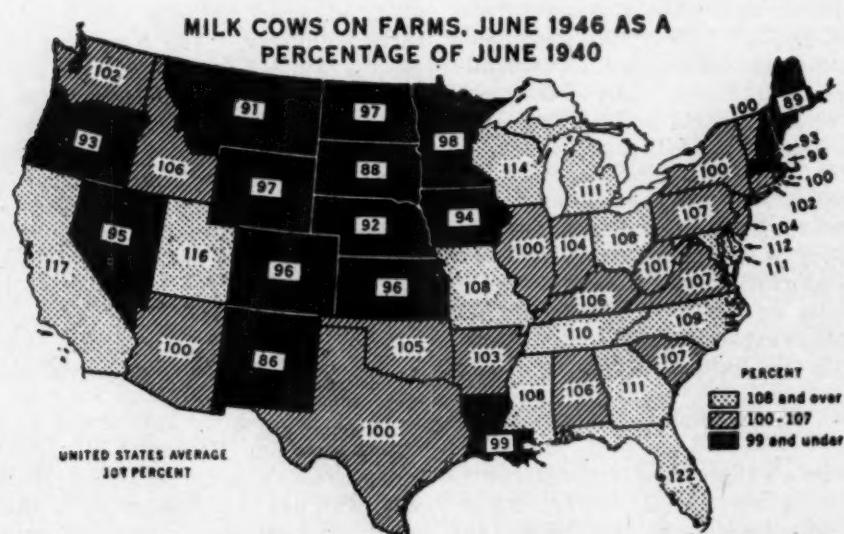
no soil conservation (and I do not have to spell that out) equal to a large livestock population in a country.

Because it is right down your alley, I offer you the preservation of our livestock population and the upgrading of the American diet as one of the orienting, objective challenges of your profession.

Icterogenic Yellow Fever Vaccine

The attacks of jaundice following the use of yellow fever vaccine in military camps in 1942 was never definitely fastened upon the vaccine itself, except as a predisposing factor of an unknown specific infection clinically similar to catarrhal jaundice and epidemic hepatitis. Because of the high incidence of jaundice following the vaccinations, certain batches of yellow fever vaccine were held responsible. Subsequent studies (*Am. J. Trop. Med.*, Jan., 1946) have revealed the occurrence of the specific disease among unvaccinated populations without, however, exempting the vaccinal reaction as a predisposing agency.

Dairy Cow Population Decreasing



—Bureau of Agricultural Economics, USDA

The over-all decrease of dairy cows in 1946 compared with 1940 was 4 per cent; and was 6 per cent below the record high during the war.

The Army Veterinary Service

COLONEL JAMES A. McCALLAM, V.C.
Washington, D. C.

THE SURGEON GENERAL of the Army, Major General Norman T. Kirk, has asked me to extend you his greetings and his wishes for a most successful meeting and to tell you that he is deeply appreciative of the contributions made by the veterinary profession to the war effort. Speaking for myself, I consider it a privilege and an honor to be given a place on the convention program.

Before talking about the Army Veterinary Service, I would like to speak of the profession in general for a moment. There is no denying the fact that the veterinarian of today is a far better trained individual than the one of fifty to sixty years ago and that the profession has made remarkable advances. Not many years ago, most people thought of veterinary medicine as

being confined to the treatment of livestock. Did the profession remain there? We did not. We were slowly but surely advancing. Along came organized meat inspection; we began thinking and practicing in terms of organized preventive medicine and control of diseases; we moved farther into the fields of bacteriology, pathology, and research; small animal practice assumed added importance; and, as times and conditions changed, the importance and position of the veterinarian in the field of public health were recognized more and more, particularly in milk inspection and food sanitation.

Had the veterinarian as an individual and the profession been satisfied only to prescribe for and treat animals, would we be meeting here today as an outstanding,



A section of the Veterinary Corps display which was part of the Medical Department exhibit at the American Medical Association convention in July. Similar exhibits were displayed at the eighty-third annual meeting of the AVMA in Boston.

Presented before the eighty-third annual meeting of the American Veterinary Medical Association, Boston, Aug. 18-22, 1946.

Chief, Veterinary Division, Office of The Surgeon General, U. S. Army, Washington, D. C.

recognized, scientific organization? I think not! Much of our progress can be attributed to notable achievements by individuals who dared venture and pioneer in

properly related fields which for many years had not been considered appropriate for members of our profession. As veterinarians, we owe a debt of gratitude, I think, to those pioneers in the profession who had the vision to recognize opportunities for veterinarians in related fields.

As a profession, we are not large and, as an organized group, the American Veterinary Medical Association is relatively small. It is, therefore, highly important that we continue our advance as a unit. The retarding of any recognized phase of veterinary medicine by any veterinarian or small group, whether members or non-members, is neither good for the profession nor for this association.

The title of my paper, "The Army Veterinary Service" was chosen because it is inclusive of all activities with which the Veterinary Corps is charged. As veterinarians and as members of the American Veterinary Medical Association, I know that you have more than passing interest in the veterinary service of the Army.

On June 3, 1916, the Veterinary Corps was created as an integral part of the United States Army. This was the culmination of a long-extended effort by the American Veterinary Medical Association to get recognition and a commissioned status for Army veterinarians. During the thirty years since the birth of the Corps, much progress has been made in further improving the status of the veterinary service.

In World War I, with an army of approximately three million men and about 475,000 animals, about 90 per cent of the 2,234 veterinarians in the service were engaged in work with mounted units and about 10 per cent in food inspection.

In World War II, with approximately eight million people in the Army and approximately 50,000 animals, it was a natural consequence that 85 to 90 per cent of the approximately 2,200 veterinary officers would be engaged directly and indirectly in the inspection of food, and about 10 to 15 per cent would be concerned directly and indirectly with the activity of veterinary medicine known in the Army as animal service.

The Veterinary Corps between World War I and World War II had gradually taken on added importance in the planning of the War Department. Its personnel re-

ceived training which increased their value not only as veterinarians, but as administrative and commanding officers. Why was this? Let us hark back to the years prior to 1916. Many of you recall the lot of the Army veterinarian then was a sad one. He was neither an officer nor an enlisted man. He had no authority whatsoever; no voice or word in organizing, planning, or directing, the latter even to the extent, on occasions, applied to the prescribing and treatment of animals and the control of diseases. He was an individual treating animals or, as a number were, engaged in the inspection of meat and meat products and under the immediate direction and supervision of the lay procuring agency. Some of you here today remember the trying days and obstacles encountered in some places during the early days of World War I.

Following World War I, and with the enactment of the National Defense Act of 1920, the Corps became organized on a sound basis. A series of Army Regulations was promulgated which set forth the duties, functions, and responsibilities of the Veterinary Service and its relationship in the Medical Department and to the Army as a whole. Tables of organization were authorized for veterinary units and plans and directives formulated for the utilization of these units. The Army Veterinary School was enlarged and a postgraduate course of instruction established for veterinary officers, then later a school of instruction for enlisted technicians. Reserve Officers' Training Corps units were authorized and established in a number of the colleges of veterinary medicine. The veterinary service in the Army became a small, but nonetheless important, cog in the plan of our national defense. Did this just happen? Like Topsy, did the Veterinary Service in the Army just grow? No, gentlemen, it was because the Army realized that an organized and trained veterinary service was essential. Some years after the first World War, when the Army began to abandon animal transport in favor of motorization and mechanization, many observers felt that the Veterinary Corps would gradually be relegated to a place of minor significance in the military organization. Obviously, these observers were thinking only in terms of the veterinarians' duties with animals; they did not consider the growing need for Army food inspection or anticipate the tre-

mendous demands that would be made on the veterinary service in meeting that need. In fact, by the time motorization and mechanization came into large-scale use, the veterinary service already had found it necessary to detail the greater number of its personnel to meat and dairy inspection work, either full time or part time. Throughout the remainder of the peace-time period—particularly when international trends pointed to a global war requiring an enormous army, with a consequent enormous amount of food to sustain it—the importance and scope of veterinary food inspection continued to increase. By the time World War II broke out, food inspection constituted the major work of the veterinary service.

Not only the Army, but the veterinary profession as a whole, has expanded its activities in the field of food inspection. As a profession, I believe we would not admit perfection. However, I can say without reservation that no other profession or group of individuals begins to approach the veterinarians' skill in inspecting foods of animal origin. The basic professional education of the present-day veterinarian

permits him to adapt himself quickly to this specialized field, as was shown during World War II. The veterinary profession can well be proud of the commendable service rendered along this line by Army veterinarians. Without their professional ability, loyalty, and pride in the profession, the job could not have been done. These officers worked long and irregular hours in contractors' plants to see that specification requirements as to quality and sanitation were fulfilled in processing billions of pounds of subsistence for shipment overseas and for the troops still in the States.

This excellent work was accomplished principally by veterinarians called from civil life to active duty in the Veterinary Corps, Army of the United States. It proves the contention of many, and I reiterate, that the veterinarian is basically, professionally qualified to perform this work and to expand in the field of public health, locally and nationally.

In this connection, a general officer on the Quartermaster General's staff who was responsible for food procurement and distribution stated publicly that the accomplishments in this field would not have been



Another section of the Veterinary Corps exhibit at San Francisco and Boston, showing Blitz, the popular Army dog, which has been detrained but is still a member of the K-9 Corps.

possible without Army veterinarians. I consider this a nice compliment for the Veterinary Corps. Moreover, it is evidence that the Veterinary Corps has proved its worth in this field of endeavor.

The above-mentioned commendation is not the only recognition paid the veterinarian for his work during World War II. Surgeons who have been in responsible positions in overseas theaters, as well as Quartermaster officers, have leaned heavily on veterinarians in matters pertaining to food inspection, food conservation, and food sanitation and they are especially appreciative of the work of the veterinary service. We are of the opinion that thousands of people, particularly those in the medical profession, are returning to civil life aware for the first time of the wide and important rôle the veterinarian can and does play in their community life. It is significant to note that not until recently did the United States Public Health Service include veterinarians in its organization.

It is perhaps unfortunate for some who were not interested in food inspection that more service with animal units was not available. It must be remembered that few officers coming into the Army from civil life actually did a job either for which they were trained in college or in which they were engaged prior to active duty. There were bankers serving in forward or rear areas as ordnance or quartermaster officers, many engineers had desk jobs in no way connected with their civil occupation and, even in the Medical Corps, many doctors were far removed from hospitals and the actual practice of their vocation. This is a problem in war for which no solution has yet been found. They were, however, as were veterinarians, called from practice and used in positions requiring a professional background. They were contributing in the Army to the war effort.

Another point to which I should like to call attention is the fact that, as a commissioned officer, one is expected to be able to perform routine duties apart from those directly connected with his military specialty, such as sitting as a member of court-martial, member of boards, investigating officer, and inspecting officer. The veterinary officer received his share of these assignments and, from all reports we have received, he performed the task in a capable and efficient manner.

I believe the foregoing more or less gives you the general picture. Much has been omitted which could be included, such as the aid and assistance given some of our Allies by the Veterinary Corps in its official capacity, in furtherance of the war effort, not only in food inspection but also in animal service; the accomplishments of the Army veterinary officers in civil affairs and in the Military Government group in occupied countries, especially in Europe, in Japan, and in part of Korea. Many veterinarians have thus come directly in contact with diseases not indigenous to America, especially not to North America, and they have observed and directed methods of prevention, control, and treatment. Such experience may some day be of inestimable value to the livestock industry of this country.

Nor have I commented on the great amount of antemortem and postmortem inspection done in the China-Burma-India Theater where there was no organized system of meat inspection at slaughter. Also, members of the Army Veterinary Corps performed antemortem and postmortem inspection in this country in plants certified as "limited inspection" by the Department of Agriculture and under the technical supervision of the Meat Inspection Division of that department.

The work of the Army Veterinary Laboratory, a part of the Army Veterinary School at the Army Medical Center in Washington, should not pass unnoticed. Its functions include, in addition to training officers in various laboratory specialties, clinical diagnostic procedures, the bacteriologic and chemical examination of meat, meat-food, and dairy products, research activities, and the production of certain veterinary biological products. The Food Analysis Section, for example, conducts the chemical and bacteriologic examination of foods of animal origin to determine if they comply with federal specification and tentative specification requirements. Extensive work also was done on the standardization of methods for the bacteriologic examination of dried egg powder. Veterinary laboratory work in food inspection is carried on in Army area laboratories and similar installations, and by the veterinary sections of overseas laboratories.

Research and development projects have been under way, one being the improvement of a vaccine against equine encephalo-

myelitis suitable for administration to human subjects. Purified vaccines for use against the three strains of encephalomyelitis virus known to occur in the Western Hemisphere have been prepared and are ready when needed.

One of the major activities of the veterinary laboratory service during the first five months of 1946, was the production of 1,950,335 cc. of Japanese B encephalitis vaccine. This, I am informed by Colonel Randall, who is director of the Army Veterinary School, is the first time that infected chicken embryo tissue vaccine has been employed for the mass production of a Japanese B encephalitis vaccine. The project was carried out in collaboration with the Division of Virus and Rickettsial Diseases, Army Medical School, which conducted the necessary control tests.

A veterinary research laboratory was established at the Remount Depot, Front Royal, Va., in 1939 by Brigadier General Kelser, then director of the Veterinary Division, Office of the Surgeon General. This was for the purpose of conducting research in equine diseases, specifically periodic ophthalmia and influenza. This laboratory was under the immediate direction of Major Thomas C. Jones, V. C. Several manuscripts have been published on the work so far accomplished and others are to follow. This research is being continued and an additional project has been initiated.

I do not believe that anyone is under the illusion that the wartime veterinary service was administered with the touch of Midas, or that veterinary operations were conducted without some errors being made. Such was not and could not be the case, nor have I intended to convey any such idea. There are, no doubt, individuals who feel, and sincerely so, that they have a grievance, that if they had been in charge, things would have been operated differently. Perhaps some individuals do have what they honestly consider complaints. Do not think this state of mind is peculiar to the Veterinary Service; I am quite certain it existed in every branch of the armed forces.

It is probably natural for a person to become engrossed in his individual sphere of activity. One is apt to, and does at times, overlook the large overall picture. World War II was a global conflict. No one knew how long it would last. Those responsible

for, and directing, the efforts of our country did know that everything must be put into the winning of that war. Planning was of necessity on a long-range scale, including those plans for the utilization of personnel.

It is essential in war to consider all eventualities that may occur and be prepared to meet them. This is an important consideration that individuals in lower echelons have a tendency to overlook. The high command had to, and did, consider the overall picture. Decisions, had to be based on what would best serve the interest of the country and win the war as quickly as possible. Such decisions often brought rulings which certain technical services or branches considered inimical to the activities of their group, or which small, subordinate groups of individuals considered incorrect. It is necessary to give and take in any business, in any profession, in any walk of life, and it is truly essential in modern war. Let each and all of us remember this: those in high command and in other key positions had the facts, knew what was needed, and acted accordingly.

My colleagues, I am certain that with the passing of time and in the light of mature judgment you will agree that those responsible for direction of the Veterinary Service during the war had the interest of the profession, the Corps, and the country at heart and, in spite of obstacles—there are bound to be some in any war—did what was best for all.

It was necessary that physicians, dentists, and veterinarians come out of retirement and resume practice, and others had to postpone retirement. The entire field of civilian medicine responded magnificently. The American veterinary profession, as well as our allies to the north and south of the United States borders, met the challenge imposed. We can well be proud of our record. The prevention and control of animal diseases was so well regulated that we did not have an epizootic of any significant proportion among civilians or military animals. Those members of the profession not in the Army, whether in another federal agency or in private practice, thus made an outstanding contribution to the war effort. Nor should we forget the officials of the American Veterinary Medical Association and those of the state veterinary associations who rendered invaluable

aid to the government and in so doing likewise continued their interest in and for the veterinary profession. As time goes on, I am certain we will realize more and more what a debt of gratitude the veterinary profession owes to the officials of this association and to those of the state organizations.

As a member of the Veterinary Corps, United States Army, and as the present chief of the Veterinary Division, Office of the Surgeon General, I want to take this opportunity to express my sincere and whole-hearted appreciation to those veterinarians who left their practices and other fields of veterinary endeavor, and rendered such unselfish, loyal, and outstanding assistance and service.

The services performed by, and the accomplishments of, the Veterinary Corps in World War II were largely due to your efforts and your sacrifices. I salute you all!

Search and Research— Medical and Veterinary

Wallace Marshall, M. D., Mobile, Ala., emphasizes the need for research and the satisfactory results obtained by coöperation between the physician and the veterinarian. In *Medical Times* (August, 1946), he says: "A big laboratory is not absolutely essential in order to accomplish the average research problem. Much animal research can be completed satisfactorily with the aid of a colleague or two in veterinary medicine in the usual pet hospital. Instead of spending quite a sum to accomplish animal research, these necessary facilities are readily available through temporary affiliation with such colleagues. We do not take full advantage of this coöperation which most veterinarians would gladly give for such scientific research. Besides, many excellent suggestions can be had from these colleagues, whose basic training is quite similar to that of doctors of medicine.

"Your editor has been following the above plan for some time with his own work on tumor research, and he has had excellent coöperation from his veterinarian colleagues. These men are experts in handling animals of all types, and all the necessary facilities for such research are easily available.

"If you are planning to accomplish some animal experimentation, and your wife ob-

jects to having rats around the basement, follow our suggestion and obtain the assistance of a veterinarian colleague. We are sure that he will assist you well and will make it possible for you to obtain the solution to your research problem. Don't forget that the veterinarian is also a trained scientist. Talk and work with him; it will do you much good."

[We appreciate these words of commendation, and trust that the frank and earnest report of successful coöperation of the research editor of *Medical Times* with his veterinarian may point the way to an ever increasing appreciation of the mutual benefit to be derived from such association.—Ed.]

New Drugs in U.S.P. XIII

The following is a list of new admissions to the United States Pharmacopeia that have special interest to veterinarians:

Calamine	Progesterone (Schering)
Cholesterol	Pentothal (Abbott)
Corn oil	Testosterone propionate
Cupric citrate	Tetanus toxoid
Peanut oil	Tuberculin, P.P.D.
Penicillin (8 products)	Zephiran (Winthrop)
Bentonite	Sulfamerazine

These are taken from a list of more than a hundred, 14 of which are proprietary preparations made by Abbott, Ciba, Lilly, Merck, Roche-Organon, Sandoz, Schering, Winthrop, or Wyeth. U.S.P. XIII will be available Apr. 1, 1947. The AVMA representative to the United States Pharmacopeial Convention is H. E. Moskey, Washington, D. C.

NATIONAL CAT WEEK



APPRECIATION

UNDERSTANDING

BETTER CARE

National Cat Week, Nov. 3-9

Historical Sketches and Memoirs

III. The General Practitioner

(Continued from October JOURNAL)

L. A. MERILLAT

Chicago, Illinois

2.

The successful general practitioner, as the psychoanalyst would explain, must rate high in ego, id, and superego, meaning reason, desire, and conscience. To live up to the traditions of his art, he must keep his superego working without surcease. Service is the id of his occupation. The old gag **Good Service** that he is to feed what the fireman is to shelter bears repeating and remains unchallenged. The wise old owl keeps his clientele from vanishing through an abiding faith in good service—the best instrument there is to offset the hard luck that pursues the most faithful doctor. On the long run, good luck is unreliable. None is ever blamed for losing a life he tried his best to save.

Getting there on time and taking command like the homicide squad at the scene of a murder is as essential as the deft hand and the knowing mind, the sensible dress, and the manly conduct. The slaggard hasn't a ghost of a show in veterinary practice. In spite of accomplishments he's always a flop. The towering figure of our vocation pulls up with screeching brakes and has all hands running for soap and water and buckets and towels while rolling up his sleeves and going into action. The other extreme is arriving late, bewildered, and stalling. For the nonemergency call, the rhythm and routine are the same in modified tempo. Display of sureness and speed are not showmanship in any event.

The largest practice I have ever known from personal observation was built on the fixed policy of answering the telephone day or night, every day of the year, and getting on the way to the waiting client without delay, come church or holiday or Uncle John's funeral. While everyone is entitled to recreation, that ought to be arranged without breaking the irrevocable rule. The lone doctor, however, is admittedly less fortunate. Yet, if not too selfish to collaborate with colleagues, he will seldom have to leave his practice entirely in the lurch.

3.

I once heard a lone practitioner's *aide de camp*, his good wife, explain that "The doctor went fishing with Judge Brown of The Doctor's Wife the Circuit Court and he Passmore of Dundee to anyone who called." That was a high order of discipline. The Doctor had put himself in good company and his indispensable spouse proved that he had provided thoughtfully for such an emergency. Furthermore, the spirit shown was wholesome for all concerned.

In the business sense, the general practitioner's wife is president, chairman of the board, general manager, and vice-president in charge of operations, secretary, treasurer, accountant, and queen of the realm in any man's practice. Any lower rating would be sacrilegious.

Absence in order to attend an association meeting may be declared for what it is—a trip in the interest of the community. The custom of announcing one's absence in the local press, encouraged by some associations, has virtue far above the level of a news item, elementary as it may seem. But, inasmuch as the practitioner usually takes his wife along (as he should), some step ought to be taken to provide information to the deserted community in the case of emergency. If the general practitioner does not help the associations in their public relations programs, his segment of the profession is the loser, and that part of the effort pertaining to him breaks down.

There is more than just gallantry involved in praising the practitioner's wife for the service she renders in her every day life. Her contacts are close and her influence majestic. Women's auxiliaries, formal or informal, are not only precious elements of the integrated whole but their responsibilities are immense. Chummy sentiment is disproportionately slight *vis-a-vis* the materialistic side of "The Doctor's Wife." Mind you, this is a woman's

world, and not perhaps. Urged by the late, lamented John Blattenberg, a confirmed bachelor (up to that time), a women's auxiliary in the AVMA was sprouted at the Kansas City meeting of 1917 with these thoughts in mind. But no one has ever said much about the practitioner's wife as an important figure in the country's affairs. By reason of her numbers, her rôle, and creative influence she should be the spine of these movements.

4.

The ingrained habit of avowed incompatibility among veterinarians handed down from the nineteenth century will always

The Era of Quarrels stand out as prize-winning stupidity in the fields of practice, education, and associations. When I came to Chicago in 1888, veterinarians were not on speaking terms, let alone socially allied. Down on the farm whence I had just arrived, I had overheard the self-made doctors pecking at their competitors but I was ill-prepared to find the titans of the Windy City much less polite to one another than these ungraduated gelders. I was soon to learn, however, that Chicago was but a sample of what's what in other cities and that physicians were only beginning to see the error of their ways in that respect. I remembered that the two physicians at home were once bitter enemies and that our four ministers of the gospel were no more fraternal than other professional men. To illustrate—two nationally known figures of the same veterinary faculty thumbed their noses at each other for more than a generation. They served separate clienteles from the same set of offices. The one didn't go to the other's funeral, and there was no love to lose among the rest of the teaching staff. The struggle for sick horses had its repercussions beyond the home town. Inside intrigue twice defeated Dr. A. H. Baker for the presidency of the AVMA and I was given a good licking for the secretaryship in New York (1913) by the same token—scheming of home origin. All common sense was drowned by the struggle for customers: clients for the doctors and students for the professors.

5.

In this Golgotha of discord and spite and jealousy, the idea of starting a local asso-

ciation was pretty far-fetched and seemingly impossible. Shortly after I joined the McKillip staff of assistants in October, 1888, a young physician located over a nearby drug store. His diploma read, "University of Toronto, 1888", the same year I had graduated at the veterinary college over on Temperance Street. We had been taught by the same professors. One day his buggy horse, injured on the street, was given first aid by a local veterinarian on the spot. When brought to the hospital for treatment, the head of our staff made an uncomplimentary remark—a cunning sneer—about the first aid treatment that had been given by the other veterinarian, whereupon the young physician remarked that it was stupid for one professional man to criticize the work of another. "*It hurts self and profession,*" he said. The remark, though calmly spoken, burned in like a sizzling brand, never to be forgotten. But, being but a shy farm boy in a big city working among tycoons of the realm, there was no thought of applying that ideology beyond personal use. Yet, it did lead to the founding of the McKillip Veterinary College (1892) and the Chicago Veterinary Society (1896). The former was the first three-year school of veterinary medicine in this country except for Iowa State (1879), and the latter the first local veterinary association whose actual launching took place after several informal luncheons in 1894 and 1895. Slowly, hatred of one another began to seem reprehensible. To me it was a great moment of American veterinary history—the starting point of friendly co-operation among general practitioners who were then virtually the only personnel of the forming profession. The Chicago group was no more guilty than those of other cities. The veterinarians of the nineteenth century were gluttons for hurting themselves by sneering at colleagues. The greatest evils among men are those which men inflict upon each other. The job was to make a profession out of a group lacking organization and cohesion. To achieve that, association work had to take precedence over everything else. The veterinary profession had to dress up for a decent inspection. The American Veterinary Association (1854), the United States Veterinary Medical Association (1863), the Illinois and Michigan state associations

(1883) had not touched this vital point. The Chicago Veterinary Society (1896), with an unholy situation to overcome, made that its principal object and it thrived on that issue for fifty years.

The lives of prominent men have been shattered by their bad conduct toward one another. The path of veterinary medicine is strewn with careers broken by the mistaken idea that superiority can be attained by slinging mud.

6.

Where look for replacements? The era of bearded men in the classrooms of veterinary colleges was gone. Younger men

began to take their places in
Whence Came You? the 1880's. In the 1890's, the middle-aged practitioners practically vanished from the classes. An actual check of more than 100 freshmen made in 1901 showed many walks of life represented, from the teller of the First National Bank to the minister's son—the leader of the Silver Cornet Band (town incog.),—school teachers, blacksmiths, horse trainers, veterinarians' sons, one bartender, hired hands, and a sprinkling of farm boys primed by fond parents to qualify for a boiled shirt job. This census is real and not exceptional. The present veterinary student is but continuing his school life, unacquainted with dinner pails and pay checks, and is of practically uniform education and age. The source of veterinarians was based upon the prospect of earning \$4,000 a year in practice instead of \$750 a season by the school teacher, or \$40 a month by the bank clerk or station agent. The entrance standard ranged from no-questions-asked on up. In 1895, the standards had risen to a grammar school education or alleged equivalent in the private schools, a high school diploma or reasonable facsimile in the state colleges up to 1920, when a high school rating became mandatory; in late 1930's a pre-veterinary year was added. That in practical terms is the answer to "Whence came you?"

Worthy men came off the production line during each vicissitude, but today, the question of origin remains as unsettled as ever. The four years of high school plus a year at college is little enough, seeing what veterinary science now is, though the grade card may not be the right way to score a plebe on aptitude. I remember both

city boys and farmers' sons who failed and succeeded. I particularly recall a city barber who developed a sizable practice in the Northwest, president of the state association an' everything, and a six-foot-one farm boy, who built up a famous small animal practice. So, judging students by dogmatic regulation may fail. Adaptation can be hidden by an unseen screen that only time can unveil. If the old way was not perfect, I have never seen any of these veterinary students hunting around for a left hand monkey wrench nor writing a letter to the mother of the unknown soldier.

Granting that the human being has remained much the same through the years, it seems quite obvious that restricting admissions to veterinary schools to any one class, including farm boys, is but to sacrifice a lot of inborn pansophy sorely needed in the practice of veterinary medicine. The destiny of the adolescent appears to be unpredictable. In one college where I brazenly attempted to teach surgery, every chair was required to choose the best prospect and award him a gold medal on scholarship, i.e., on the prevailing grade-card basis. I do not recall having made even a fair guess. One of these medalists (out of about 20) spent the rest of his life in the fire department of an Ohio city and another, particularly promising, became more fond of linseed poultices and liniments than surgery. Some of the less scholarly didn't do so badly. So, teaching methods were not all wrong. Anyhow, here was living evidence in students and graduates that the grade card is not as prophetic as it is cracked up to be. I am aware that there are other yardsticks now for measuring brains. May the prognostications be more exact! Only checkups after the measured prodigies have battled with this world can answer that one. The will to succeed was more revealing. Cramming for examinations was too often mistaken for knowledge. The graduate doctors of our staff and the student assistants who were diligent and trustworthy did not fail in life, the others were anybody's guess. Nowadays, there is the small animal branch of veterinary medicine to reckon with. It is only 20 years old as a going business—and more nearly a "business" than general practice. The fancy, any day now, will be looking into the relations of veterinary students to its 15 million dogs. Dogdom has

but to present itself before legislatures as one of the country's outstanding industries and agree that dogs are livestock to break down the prejudice law makers have against making appropriations to educate men for a field they do not take seriously.

Moreover, there is the broadening field of food hygiene which hasn't much to do with knowledge of tedders and combines. This detour is made only to emphasize that general practitioners, whose public relations are severely apart, must spring from the same basic curriculum but not from the same walk of life. To choose a veterinary student for his experience in farming is not spoofed, though to many of the future veterinarians the milk bottle will be the nearest they will ever get to a cow. And let us remember that the farm population has dropped to 30 million. There might be some hard wood among the other 110 million. The millions of farm boys (or should we say suckers) who depopulated the farm areas were no more or no less apt to become bankers or bank robbers than the chaps who never saw a silo.

7.

What about veterinarians' sons as replacements? This is a delicate question—like meddling in a family quarrel. A good

The Doctor's Son

by-line to dodge here. As students, I've found the doctors' sons less enthusiastic over the great adventure. They came on account of Dad's rheumatism and he (Dad) has illusions that the son will be right there to take over when the said rheumatism gets him down. That seldom happens. In the first place, the son knows too much about the hardships of practice and how hard was the struggle to keep the children in school to be disillusioned. In the second place, Dad is not always in a position or willing to give the son a break after he has graduated. The son will marry and there will be two families to support from one practice. Lasting father and son partnerships are rare; often there are family quarrels which persuade the young doctor to seek another location or enter another branch of the service. To say more of this and Dad's remarkable longevity gets one into deep water. It's a smart thing for the father to send the son after a

D.V.M. only when the delusion about taking over the established practice is kept out of the calculation. Better think of grandsons as successors. A graduate of 24 has a father of 50 with twenty-five or more years to go, rheumatism all gone and rarin' to carry on to 90.

(To be continued.)

Export of Wisconsin Cattle

Dr. V. S. Larson, chief of the division of livestock sanitation, Madison, Wis., and Dr. J. S. Healy, USBAI inspector in charge, Madison, report that during the year ended June 30, 1946, approximately 15,000 head of cattle were shipped to foreign countries from this state, and an additional 8,500 head were sent to points of embarkation without designating a foreign destination because shipping conditions were uncertain. Poland heads the list of importing countries with 3,861 head and Mexico is second with 2,190 head.

A total of 70,745 health certificates was issued for cattle leaving Wisconsin. Illinois was the heaviest purchaser, taking 17,447; and was followed by New Jersey (10,048) and Iowa (4,593). Shipments were made to 46 states and to 15 foreign countries.

BCG Vaccination

On the basis of experiments involving vaccination of 1,550 American Indians with BCG while holding 1,457 as controls, Aronson and Palmer of the Health Division, Office of Indian Affairs, found that such vaccination had a decidedly beneficial effect. Work on this problem was started in 1935, and the Indians vaccinated were from 1 to 20 years old. During the intervening ten years, there were four deaths assigned to tuberculosis among the vaccinated persons, while there were 28 deaths from this cause among the unvaccinated controls.—*Public Health Rep., June 7, 1946.*

A new cream separator, U. S. patent 2,406,819, throws out a fat content as high as 75 to 80 per cent, in fact, butter, instead of the usual 16 to 22 per cent cream. "No more churning," is the inventor's slogan. The milk is run through hot, and of course is pasteurized.

National Committee on Newcastle Disease

[Pneumoencephalitis]

Further recommendations for the control of pneumoencephalitis* were adopted by the National Committee on Newcastle Disease to protect flocks against this infection, with a minimum of cost to the industry and a minimum of regulations. It suggests voluntary coöperation of producers, hatcherymen, breeders, processors, and others concerned, and the promulgation of regulations only when it has been clearly established that such voluntary programs are ineffective.

The committee, of which Dr. Cliff Carpenter is chairman and Dr. T. C. Byerly is secretary, urges that the following recommendations be followed as closely as possible.

- 1) That all entries to egg-laying tests shall be accompanied by a declaration or certification by the owner that to the best of his knowledge the birds do not originate from flocks or sources showing active infection with Newcastle disease, nor were recently exposed to the disease.
- 2) That managers of egg-laying tests request the consent of owners of entries in 1946-47 tests to slaughter such birds at the close of the contest, except that when an entry can be tested at the expense of the owner and is found free of infection with Newcastle disease, such entry may be returned to the owner, under the supervision of local authorities.
- 3) That it should be recognized that detection of infected flocks at the earliest possible moment is the first requisite for suppression of Newcastle disease, and that primary diagnosis should be made only by laboratory procedure.
- 4) That transportation of birds or carcasses for laboratory diagnosis should be only by private vehicle or carrier.
- 5) That vaccination with inactivated Newcastle disease virus vaccines may be advantageous where exposure to infection has occurred recently or may be imminent or likely.
- 6) That to destroy the virus, contaminated surfaces require thorough cleaning and scrubbing with lye solution, followed by the application of a permitted saponified cresol disinfectant. (A "permitted disinfectant" is one recognized by the U. S. Department of Agriculture for use in official disinfection.)
- 7) That, until further evidence of the persistence of infectivity in breeding flocks is available, sale of hatching eggs and day-old chicks originating from flocks in which the disease has occurred be suspended for at least thirty days after egg production in the flock has returned to normal and the premises have been properly cleaned and disinfected.
- 8) That no hatchery produce or offer for sale chicks or pouls originating in flocks showing evidence of active infection with, or recently exposed to, Newcastle disease. Sanitary commercial hatcheries distributing only day-old chicks or pouls segregated from all other poultry and from persons handling other poultry are not known at present to be a common source of infection with Newcastle disease.
- 9) That the danger of using old and dirty egg crates, fillers, and flats for the transportation of hatching eggs be recognized and guarded against by all practical means. It is further recommended that eggs be packed in a clean room other than the poultry house.
- 10) That all unnecessary visitors, all started chicks and pouls, and all persons handling other poultry be excluded from the hatchery. Hatcheries selling started chicks or pouls should segregate these birds from newly hatched poultry.
- 11) That all dead birds, offal, and hatchery waste be disposed of by rendering, incineration, chemical disinfection, or by deep burying.
- 12) That source flocks be inspected periodically for health.
- 13) That hands be thoroughly washed, and that all outer garments, footwear, instruments, and equipment used by chick sexers, cullers, blood testers, and others who must visit poultry premises be disinfected before leaving each premises.
- 14) That all crates and other equipment be thoroughly cleaned and disinfected with a saponified cresol solution permitted for official disinfection, before admission to the premises.
- 15) That feed bags be re-used only after thorough cleaning.
- 16) That all crates and vehicles used for transporting poultry for slaughter be cleaned and disinfected after each use.
- 17) That cull poultry rejected by a processor not be returned to the farm nor offered for sale to other processors.
- 18) That poultry offal and manure from all processing plants be disposed of in such a manner as to prevent the spread of Newcastle disease through these means and with retention of feed or fertilizer value of these materials. The manner of such disposal should be approved by the state livestock sanitary official.
- 19) That financial support be obtained for the study of (a) living virus vaccines alone or in combination with inactivated virus vaccines, and (b) occurrence and means of spread of Newcastle disease.

A subcommittee was selected to visit California within the next two months to study conditions in that state, where Newcastle disease has existed for a number of years.

The committee invites constructive suggestions from all interested groups to be presented to the committee through their appointed or elected representatives.

*Because of the ambiguity of the term Newcastle disease and the fact that pneumoencephalitis properly describes the condition, the JOURNAL proposes the use of the latter term.

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

Equine Gonadotropin in the Functional Sterility of Dairy Cattle

EDWARD D. LUBIN, V.M.D.

Danbury, Connecticut

THIS PAPER does not go into the theory and mechanism of the gonadotropic hormones in regard to fertility and the reproductive cycle. The main purpose is to present certain results obtained from the use of equine gonadotropin.

However, as an introduction to the endocrinology of the reproductive system, certain important facts in regard to the estrual cycle are emphasized toward a clear and concise understanding of functional sterility.

The most important event in the estrual cycle is ovulation, the separation of a matured ovum from the ovary and its com-

plete expulsion from the follicular cavity. The ovary itself has no inherent drive but is completely under the control of the follicle-stimulating and luteinizing factor of the anterior pituitary gland. Thus, any deficiency of the pituitary hormone, especially of the follicle-stimulating factor, results in complete or incomplete lack of ovulation. It is extremely essential that ovulation occur with each estrual cycle as only mature follicles ovulate.

It is my belief that many cases of sterility, in which no pathologic, teratologic, nutritive, or inherited conditions occur, are due to a lack of complete ovulation. The



Fig. 1—Cow 38 and her triplets.

TABLE I

Animal	Services before treatment	Dose of serum injected	Services after treatment	Results
1	6	15 cc.	1	Pregnant
2	3	20 cc.	1	Pregnant
3	2	15 cc.	1	Pregnant
4	6	30 cc.	2	Pregnant
5	3	20 cc.	0	Developed a retained corpus luteum
6	4	20 cc.	0	Developed a retained corpus luteum
7	3	20 cc.	1	Pregnant
8	3	17 cc.	3	Open
9	7	20 cc.	1	Pregnant
10	4	20 cc.	1	Developed a purulent pyometritis
11	2	25 cc.	1	Pregnant
12	6	10 cc.—16th day 10 cc.—17th day	1	Pregnant
13	3	15 cc.	1	Open
14	6	20 cc.	1	Pregnant—aborted twins at five months.
15	4	15 cc.	1	Pregnant
16	4	20 cc.	2	Pregnant
17	3	20 cc.	1	Pregnant
18	6	22 cc.	1	Pregnant
19	5	20 cc.	2	Open
20	3	15 cc.	0	Developed multiple cysts on both ovaries.
21	4	30 cc.	1	Pregnant—twins.
22	2	16 cc.	1	Pregnant
23	4	17 cc.	1	Pregnant
24	2	20 cc.	1	Pregnant
25	4	15 cc.	1	Pregnant
26	3	20 cc.	1	Pregnant

TABLE 2

Animal	Services before treatment	Dose of serum injected	Services after treatment	Results
27	3	20 cc.	1	Pregnant
28	3	20 cc.	2	Open
29	10	20 cc.	1	Pregnant—pair of full-term twins.
30	3	20 cc.	1	Pregnant
31 (1945)	7	22 cc.	1	Pregnant—twins.
32	5	20 cc.	2	Pregnant
33	4	18 cc.	1	Pregnant
34	2	18 cc.	1	Pregnant
35	3	15 cc.	2	Open
36	4	20 cc.	1	Pregnant
31 (1946)	1	20 cc.	1	Pregnant
37	2	20 cc.	1	Pregnant—full-term triplets (see cut).
38	3	20 cc.	1	Pregnant
39	10	20 cc.	1	Pregnant
40	2	18 cc.	1	Pregnant
41	5	20 cc.	1	Pregnant
42	4	20 cc.	0	Multiple cysts on both ovaries.
43	5	20 cc.	1	Pregnant
44	3	18 cc.	1	Pregnant—aborted triplets at six months.
45	3	16 cc.	1	Pregnant
46	3	22 cc.	1	Pregnant
47	3	20 cc.	1	Pregnant
Total no. animals treated	Average no. breeding services before treatment	Total no. animals pregnant	Average no. services after injection	
48	4.2	38	1.05	

presence of estrum itself is no indication of the ripening and separation of a matured ovum. This condition indicates an impaired function of the anterior pituitary gland in regard to a sufficient concentration of the gonadotropic hormones. Fortunately, Ascheim and Zondek were able to separate the gonadotropic hormones as such. Being proteins, they have not been produced in a crystalline form. Possibly they are large molecules absorbed by a protein (Kurzrok). Similar hormones have been found in the placenta, in pregnant animals' urine, in castrated animals' urine, and in pregnant mares' serum. It was the latter source of gonadotropic hormone, mares' serum, that was used in the treatment of the cases recorded here.

The method of treatment in a total of 48 dairy cows was as follows:^{*} Animals, in which breeding difficulty was being encountered, were given a thorough physical examination for any organic disorders of the reproductive tract. Also, a complete history was obtained as to the breeding efficiency of the herd sire, regularity of estrual cycles, past reproductive performance, the nutritional condition of the individual animal, and the general herd management was taken into consideration. If all these factors were positive as to normal reproductive ability, the individual animal was selected to undergo hormone treatment. The owner was advised not to breed the animal during her next estrum. Sixteen days after the animal was in estrum, from 15 to 25 cc. of pregnant mare's serum was injected subcutaneously. The animal was then bred in the subsequent heat period.

The results obtained from the use of the serum in individual cases are indicated in table 1.

Total results obtained from the group as a whole are reported in table 2.

From the results tabulated in table 1, one should underline some undesirable effects from the use of equine gonadotropin. Thus, in some 48 cases, 2 animals did not come into estrum owing to retained corpus luteum; in 2 cases incurable multiple cysts were produced by over-stimulation of follicular activity. We had 6 cases of multiple pregnancy, including two sets of triplets.

Figure 1 is a photograph of cow 38 and her set of triplets.

From the above results obtained with the use of equine gonadotropin in cows demonstrating functional sterility, it is my conviction that this product has a definite and positive value in overcoming this costly condition in our cattle population.

An Epulis in a Dog

On Dec. 9, 1945, an English Bulldog, 9 years of age, was presented to me possessing an epulis located between the canine and first mandibular premolar. The growth apparently involved the alveolus of the first premolar as it was quite loose. It was approximately 2 cm. in diameter, 2.5 cm. in depth and was attached to the gum by a pedicle about 1 cm. in diameter. The growth protruded from the mouth and made eating difficult. The history revealed that this slow growing tumor had been present for slightly more than a year.

Treatment consisted of ligating the base of the tumor with No. 1 silk thread and painting the tumor with 10 per cent silver nitrate solution. Ligations were made on December 9, 16, and 19. The tumor fell off on December 20. The small piece of the pedicle remaining was painted with the silver nitrate solution. In three weeks, not only was all evidence of the tumor gone, but the tooth was again firmly fixed in the alveolus.—Marvin A. Jaffe, V.M.D., Philadelphia, Pa.

Telegony, a Superstition

Before and long after it was known that life stems from a cell composed of two germ cells, one from each parent, breeders of animals held the curious view that offspring are influenced by prior pregnancies. The purebred bitch, mare, and cow they believed to be "soiled" if they gave birth to "mongrels." Neither the origin nor the basis of the superstition is known. The notion appears to have lived longest among breeders of certain types of dogs (Hagedoorn). The modern geneticist does not believe it worthy of mention except as a former superstition, or to discuss the birth of young from two sires after consecutive matings.

The intravenous use of sodium pentothal for operations of short duration continues to gain favor.—*Annals of Surgery*.

*Acknowledgment is made to First Lieutenant Morton B. Z. Krechmer, V. C., who examined and treated many of the animals included in this report.

Pentobarbital Sodium Anesthesia in Swine and Goats

The use of pentobarbital sodium solution intravenously as a general anesthetic for swine and goats is undoubtedly practiced by many veterinarians, as castrating the large boar without an anesthetic is too laborious and certainly not properly impressive. As the quantity required varies with individuals, it is best administered intravenously. We have found 60 gr. sufficient for a boar weighing approximately 750 lb. Boars ranging from 100 to 150 lb. require 10 to 15 gr.

The administration of pentobarbital sodium is not difficult. Merely place a rope noose behind the upper tusks and fasten the opposite end to a post. The tendency for the boar to pull backward when tied in this fashion permits one to make the intravenous injection. Select one of the ear veins, massage the area briskly with alcohol, then insert the entire length of a 1 in., 20-gauge needle, keeping the first finger on the ventral side of the ear and the thumb on the needle hub. With the needle and ear held firmly, the syringe can be removed quickly if the animal struggles; allow ten to twenty minutes for administration. After complete relaxation, prepare the site and proceed. Since more anesthetic may be given if found necessary, leave the needle in the vein until operation has been completed.

In administering pentobarbital sodium to goats, use the jugular vein and the same size of needle as for boars. Unless sufficient help is present, it is more practical to administer the anesthetic in a standing position. We have found most average-sized mature goats require approximately 10 gr.

The doses suggested for the boar and goat are merely guides and not to be considered as accurate. Goats exhibit a much shorter period of surgical anesthesia than swine. Most goats will be on their feet in two or three hours, while the boar requires twelve or more hours. — *M. W. Allam, V.M.D., and E. A. Churchill, V.M.D., School of Veterinary Medicine, University of Pennsylvania.*

In the hands of most anesthetists, ether probably remains the safest general anesthetic, yet it is not without danger.—*Medical Digest.*

Semen Diluter

The addition of 300 mg. of sulfanilamide per 100 cc. of yolk-citrate diluent, gave a significant improvement in the livability of bull spermatozoa over a twenty-day storage period, and prevented bacterial growth (Knott and Salisbury, *J. Dairy Sci.*, May, 1946). This procedure depressed glucose and oxygen utilization at all concentrations studied.

Anatomic and Physiologic Regeneration of Nerve Trunks

When the division of sensory nerve trunks was a common, every day operation in veterinary practice (equine of course), the regeneration of peripheral nerves was studied seriously and extensively—factually, experimentally. There were long debates over whether the relapse of lameness following a neurotomy was due to reunion of the nerve trunk or extension of the lesion for which it was performed. The subject was a live one also in human surgery—i.e., the anastomosis of nerve trunks to restore paralyzed muscles and the ever-occurring severance of nerves accidentally. The surgery of World War II has brought the subject into the frontier of surgical literature, particularly in connection with the opportune time to reunite accidentally severed nerves: immediately or later. Basing conclusions on a wealth of battlefield casualties, Spurling and Woodhall, M.C., A.U.S., (*Annals of Surgery*, May, 1946: 731-748) prefer to postpone reunion of severed nerves for three to six weeks after the date of injury. As was observed in experimental veterinary surgery* when neurotomy was common, the time that recovery of the nerve's sensory and motor function occurred varied from three and nine-tenths (3.9) months to eight and nine-tenths (8.9) months. That, however, applies only to the severed nerve trunk brought surgically into exact apposition. In veterinary surgery, where a section of the trunk has been resected, reinnervation was slower and never complete, while in experimentally reapposed trunks, the results were approximately the same as in the human cases of the

*Personal experiments at the Chicago Veterinary College, 1907-1908.

war, reported by these Medical Corps officers.

Inasmuch as there is little, if any, nerve-trunk suturing in clinical veterinary surgery, the subject is more of academic than of practical importance, except for the never-to-be-forgotten fact that severed nerve trunks, no matter how precisely reunited and healed require considerable time to "regenerate physiologically" and nerves from which a segment has been removed surgically or accidentally are permanently destroyed *per se*.

Stilbestrol in Agalactia

The proportion of animals in which lactation was initiated by stilbestrol is encouraging, says Dr. L. A. Klein in *Veterinary Extension Quarterly* (No. 101) of the University of Pennsylvania. Following a review of the literature which discusses the method of stilbestrol implantation, the size of tablets, the total dose, and the effects noted on cows and heifers, the report presents the results of treating 16 heifers for twenty-three weeks. Production varied from 1/2 lb. to 30 1/4 lb. daily, with a total production of 5 to 740 gal. Of the 16 heifers treated, 6 produced enough milk to make the procedure a profitable one.

Symptoms of nymphomania developed in many of the animals treated and, in one group, pelvic fractures necessitated slaughter of 20 per cent of the animals. Stilbestrol cannot be fed satisfactorily, but must be administered as a subcutaneous implant.

Mineral Excretion Following Fracture

Following fracture, there is a vigorous protein catabolism with losses of the nitrogenous portions of large amounts of body protein. The process diminishes progressively during normal convalescence, it is absent in cachectic persons, is not influenced by dietary intake, and is unlike the starvation reaction.

Urinary lithiasis has also been reported as a common sequel in fracture patients, especially among those placed in leg or body casts and forced to maintain bed rest (*Nutr. Rev.*, April, 1946), and observation has revealed that following fracture there is a steady rise in urinary calcium, reaching a maximum one month after the injury and beginning to fall at the time of

mobilization. It was not related to the condition previously mentioned, because the maximum was reached at a time when the protein catabolism reaction had waned and at a point where nitrogen equilibrium had again been approximated. The calcium excretion was not influenced by the type of fracture, the age of the patient, the size of the individual, nor the amount of musculature.

Phosphorus secretion in the urine reached a peak at the height of protein breakdown, and fell to a low at the end of the period of nitrogen wastage.

Interpretation of these observations is entirely speculative. It has been suggested that rarefaction of the immobilized part is a factor, and that disturbance of blood supply to the part is important. If so, the early hyperemia of the inflammatory reaction may be a major reason. The reflexes then set up reduce blood supply more than immobilization would. It is known that the speed with which maximum calcium excretion is reached is partly dependent on the degree of local trauma, but not known whether the protein catabolism is related to tissue necrosis.

Rat sarcoma and mouse carcinoma emulsions injected into hen's eggs, incubated for five days, caused tumorous growths in the embryos, but attempts to filter a virus from the growths were not successful.—*From Cancer Research*.

Surgical catastrophes run high in spite of improved methods of anesthesia. Operative deaths mostly are from cardiac failure and postoperative bronchopneumonia and pulmonary edema. Nonvolatile anesthetics should be employed with considerable caution in the aged subject.

A new gauzelike material, which is produced from seaweed and may safely be left in a surgical wound, controls hemorrhage. The action is due to alginic acid and the product (to be sold as Hemo Pak) can be sterilized like any other surgical dressing.—*Science News Letter*, July 6, 1946.

Contrary to current reports, Carney (*Annals of Surgery*, June, 1946) found no relationship between vitamin C levels in plasma and the healing of wounds.

Blood-Cell Formation in Bone Marrow

The free cells of the circulating blood stem from fixed tissues at various sheltered sites throughout the body, where they progress to maturity through a series of stages. The recognized cell families are: erythrocyte, lymphocyte, granulocyte (polymorphonuclear), and monocyte. Hematologists do not agree on the nomenclature or cell lineage. There is still much uncertainty regarding cell development because the process is complex and it is impossible to trace any individual cell throughout its succession of stages.

The red cells arise from a primitive blast cell which is identical in appearance with a comparable stage in the granulocyte line. The nucleus of this cell is large in proportion to the scant basophilic cytoplasm, and nucleoli are small and discrete. The next stage is the proerythroblast (megaloblast); the cell is much larger, the nucleus has a granular chromatin structure and may show mitosis, and the outlines of

the nucleoli are indistinct. The cytoplasm is basophilic although some hemoglobin is present.

In the basophilic normoblast, the next stage, mitosis continues and the cytoplasm remains basophilic. Gradually, the cell acquires more hemoglobin and becomes increasingly acidophilic, so that the late normoblast stage is known as the acidophilic (eosinophilic) normoblast. Eventually, the normoblast increases in size and the nucleus loses its structure, becomes pyknotic, and is extruded. At first, the anuclear cell is polychromatophilic since it retains some basophilic substance. Certain dyes precipitate this basophilic material in the form of a reticulum, and the cell is then known as a reticulocyte. Later, this basophilic

Primitive Erythroblast



Proerythroblast



Basophilic Normoblast

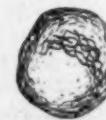
Chronic kidney disease and certain aplastic anemias interfere with this transition. The anemia produced is normocytic.

The hemopoietic substance in liver extract is needed for this transition. In pernicious anemia, sprue, cirrhosis of the liver, and myxedema, interference occurs here, and the resulting anemia is macrocytic.

Eosinophilic Normoblast



Reticulocyte



Erythrocyte



Most of the hemoglobin is formed at this stage. Iron and possibly certain factors present in liver are required for the transition. In their absence hypochromic anemia results.

When blood regeneration is unusually rapid increased numbers of reticulocytes reach the blood, as in the beginning of a remission of pernicious anemia.

Stages in the development of the erythrocyte.

residue is lost and the mature erythrocyte emerges to function as an oxygen carrier. There is good reason for transporting hemoglobin in these enclosed capsules, since free hemoglobin in the plasma is excreted in the urine.

The three types of granulocyte—neutrophil, eosinophil, and basophil—apparently arise from the same stem cell, start to differentiate fairly early, and all pass through the same stages. Their chief difference at time of maturity is in the staining reaction. The first stage after the primitive blast cell is the myeloblast and, in the next stage, the myelocyte characteristic staining reaction begins to appear. It advances to the metamyelocyte stage, in which the nucleus is often kidney-shaped, and then to the polymorphonuclear cell with lobules that often are connected by mere threads of tissue and sometimes are discrete.

Little is known of the factors which influence the development and maturation of either white or red blood cells, but there are some clues regarding the latter. It is known that, in chronic kidney disease and in some types of aplastic anemia, the cell growth is blocked at the primitive erythroblast stage. Such red cells as do mature under these conditions are normal in size, shape, and hemoglobin content, but they are inadequate in number.

The hemopoietic substance of liver extract is required for the normal transition from proerythroblast to normoblast. Faulty diet, lack of hemopoietin, or liver disease may cause an inadequate supply of this material. In pernicious anemia, hemopoietin is lacking.

Since the cell size is built up during the proerythroblast stage, a cell which tarries too long at this period will be larger than normal. Apparently, this is the way the macrocytes of pernicious anemia are produced. Therefore, when the red cells are larger than normal but well-colored, a block at the proerythroblast stage may be suspected, and the administration of liver extract or hemopoietin is indicated.

When the cells grow faster than normal, as they do in hemorrhage, they pass through the proerythroblast stage too rapidly and are therefore too small. If they also pass through the normoblast stage too rapidly, they are pale since, at this stage, the bulk of the iron is deposited as hemoglobin. Pale, small red cells suggest rapid formation, and administration

of iron and, possibly, of liver is indicated. The material in liver extract that appears to be effective in secondary anemia is not well understood, but it is not the anti-pernicious anemia factor.

Oxygen deficiency appears to stimulate the formation of red blood cells, as indicated by their increased number in persons living at high altitudes. Hemorrhage has a similar effect. In aplastic anemia, however, though the same stimulus exists, the ability to respond is lost. Probably there are endocrine influences on blood cell formation also since, in myxedema, there may be severe anemia with well-colored red cells. Anemia may develop when the diet is deficient in protein or certain vitamins, notably folic acid (B_c) and vitamins B_1 , C , D , and A . The relation of the central nervous system and the nerves to the marrow is still obscure, but it is thought that the control is primarily vascular.—*Raphael Isaacs, M. D.: Blood Cell Formation in the Bone Marrow. Scope, October, 1944.*

Absorbable gauze (=gelatine sponges) is preferable to oxidized cellulose for packing in bone surgery. The latter is believed to retard healing by lowering the local pH.

American Bacteriologists Meet

The assembled members of the Society of American Bacteriologists were told in Detroit that preliminary stages of four more medical conquests are ready to be announced: (1) a vaccine to protect against psittacosis, parrot fever; (2) a vaccine to protect against tularemia, rabbit fever; (3) a new antibiotic agent active against tuberculosis, diphtheria, and fungi; (4) a possible treatment for anthrax.

Eight other weapons have come into general use since the Society met in 1944: (1) influenza vaccine; (2) rinderpest vaccine; (3) dengue fever vaccine; (4) measles protection with blood globulins; (5) typhus fever vaccine; (6) infectious hepatitis, jaundice, protection with blood globulins; (7) two malaria remedies better than quinine; (8) streptomycin for meningitis, urinary tract infections, possibly tularemia, brucellosis, and others.

CLINICAL DATA

The Infection of Cattle with Gastrointestinal Parasites of Sheep

F. R. KOUTZ, D.V.M., M.Sc., and R. E. REBRASSIER, D.V.M., M.Sc.
Columbus, Ohio

ALTHOUGH MANY of the gastrointestinal parasites of sheep and cattle are morphologically identical, there may be some biological differences or strains that prevent ready transfer of parasites or make them host specific. Some preliminary work done by us indicated that calves under 1 year of age are susceptible to the gastrointestinal parasites of sheep. Therefore, it seemed desirable to ascertain whether the infection could be transferred to cattle 1 year or more of age. Ross¹, in his investigation, showed that lambs may be readily parasitized by *Hemonchus contortus* of either ovine or bovine origin, but that calves are more resistant to parasitism with *H. contortus* larvae of ovine origin, and that cattle over 1 year of age are very rarely heavily parasitized with *H. contortus*. Mayhew² points out that sheep and cattle can be grazed together on pasture with mutual benefit, both from the standpoint of weight gains and decrease in parasitic infection, a possible explanation being that internal parasites are host specific and that grazing cattle and sheep together reduce the number of parasites of each species on the pasture. Snell³, from his experimental results, suggests that cattle and sheep are not hosts of the same internal parasites. Stoll⁴ reports that eight species of parasites from cattle were secondarily transmitted to a group of lambs reared free from helminths. Taylor⁵ states that some field observations suggest that trichostrongyloid nematodes of sheep and cattle may belong to different biological species, but he records the transfer of trichostrongyle parasites from sheep to cattle and from cattle to sheep. Roberts⁶, in his

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The authors are from the Department of Veterinary Parasitology, College of Veterinary Medicine, The Ohio State University.

investigations, showed that seven of 14 species of parasites infecting lambs were transmitted to calves.

METHODS

Two calves, 1 male and 1 female, born from parasite-free dams, were taken at approximately 1 month of age and placed in a thoroughly cleaned and disinfected box stall in a barn where no other cattle or sheep were housed and in which there had been no cattle or sheep for years. The stall had a concrete floor, was well drained, well ventilated, and so constructed that stray animals such as cats, dogs, or birds could not enter. The feed boxes were placed in the side of the stall and well above the floor; the animals were watered from a pail that was placed on a rack by the door. One attendant was delegated to feed, water, and care for the animals, and instructed in sanitary measures to avoid carrying parasitic infection into the stall.

Fecal examinations, for the presence of parasite ova, were made at weekly intervals until the calves were 18 months of age; fecal samples were taken either directly from the rectum or from freshly voided stools. The sodium nitrate direct flotation method⁷ was used to detect the presence of parasite ova. At least ten samples from each stool were examined before the animal was declared negative. In conjunction with the sodium nitrate flotation method, the direct centrifugal flotation method with sugar, as recommended by Sheather⁷, was also used to check the samples, but none showed any evidence of parasite ova.

The pasture used for the experiment was approximately an acre of alfalfa, blue grass, clover, and timothy that had not been used for sheep or cattle for many years. The pasture was situated so that it would not receive surface drainage from adjacent land, and was enclosed with a high, wire, mesh fence to prevent the entrance of wandering animals.

In early April, a flock of sheep (36 ewes and lambs) infected with gastrointestinal parasites was turned into the pasture to spread parasite infection. Representative fecal samples taken from the ewes and lambs showed them to be

heavily parasitized. The infected flock was kept on the pasture for a period of ten days and was then removed. The pasture was then kept idle for one week. During this period, Baermann samples, taken from various sections of the field, revealed many *Strongylus* ova and larvae.

One week following removal of the parasitized sheep, the 2 parasite-free cattle, now eighteen months of age, were placed on the contaminated pasture along with 4 parasite-free lambs. Fecal examinations were made twice a week for evidence of parasite ova. The fecal samples were taken directly from the rectum in order that no contamination could occur from ova on the ground. At least ten flotation tests were made with each sample before it was declared negative.

RESULTS

Twenty-three days after the parasite-free lambs were placed on the infective pasture, a fecal examination from 1 lamb showed several ova, and within the week, all lambs were passing ova. Subsequent weekly examinations revealed large numbers of *Strongylus* ova and this condition remained constant until the lambs were slaughtered. Fourteen days after the cattle had been placed on pasture, a fecal sample taken

During the remainder of the time the animals were on pasture, weekly fecal examinations were made; the steer repeatedly showed infection, but often from ten to 15 flotations were examined before any ova were found. Most of the stools from the heifer were negative for parasite ova, but occasionally a few *Strongylus* ova were observed.

In August, seventy-nine days after the lambs had been placed on pasture, they were slaughtered and the abomasum, small intestine, and large intestine were placed in individual jars containing 10 per cent formalin and refrigerated until they could be examined for parasites. The parasites in the abomasum and small intestine were counted, using the method described by Taylor⁸. The contents of the large intestine were decanted and the residue examined for the presence of parasites. The number and kind of parasites found are listed in table 1.

About the middle of November, the cattle were removed from pasture and returned to the stall where they had been raised parasite-free, and were kept in this enclosure until slaughtered the following April. Repeated examination of the feces of these 2 ani-

Table I — Number of Parasites in Lambs Grazed on Infective Pasture

Lamb	Abomasum			Small Intestine			Large Intestine	
	Hemonchus spp.	Ostertagia spp.	Cooperia spp.	Tricho-strongylus spp.	Nematodirus spp.	Trichuris spp.	Esophago-gastromatum spp.	Nodules
998	427	440	240	1767	187	1	3	32
988	253	1534	120	960	266	1	0	8
D29	213	814	374	787	287	0	0	11
989	334	987	280	1640	240	0	0	15

directly from the rectum of the heifer contained a single *Trichuris* ovum having an active embryo. It is thought that this ovum was infective when ingested and had passed directly through the intestinal tract without the shell being dissolved. Fifty days after the cattle had been placed on pasture, examination of the feces from the steer showed a few *Strongylus* ova, as did subsequent examinations. The ova were always few and, in some instances, it was necessary to examine eight to ten samples before any could be found. Examinations of the heifer's feces were made twice each week after she had been placed on pasture. No ova were found for ninety-eight days when one *Strongylus* ovum was observed. This ovum was passed forty-eight days after the first one was passed by the steer.

mals during the winter showed about the same parasite ova level as was shown while on pasture. At the time of slaughter, the entire gastrointestinal tract was removed for parasite examination. The contents of the abomasum and large intestine were scraped into a container and examined for the presence of parasites. The material was first slowly decanted and the residue, a small portion at a time, was placed in a Petri dish and examined. The contents of the small intestine were scraped into a container and small portions placed in Petri dishes and examined under a wide field binocular microscope for the presence of parasites.

Two *Cooperia curticei* were found in the small intestine of the steer, and one *Cooperia oncophora* in the small intestine of the

heifer. The remainder of the intestinal tract of each animal was negative for any other type of parasite. A large number of small nodules about the size of a pea were found in the walls of the small intestine and cecum of the steer. Examination of these nodules revealed disintegrated larvae and a greenish pasty material. Nodules were likewise found in the intestinal walls of the heifer, but they were not nearly so numerous as in the steer, only 30 being observed. While these larvae could not be identified, they were, in all probability, those of *Esophagostomum* spp.

SUMMARY

In order to determine whether gastrointestinal parasites of sheep are readily transferred to cattle 1 year or more of age, a parasite-free cattle, 18 months of age, were placed on pasture that had been grazed by a flock of sheep heavily infected with parasites. At the same time, 4 parasite-free lambs were placed in the pasture with the cattle to serve as controls.

Twenty-three days after the lambs had been placed on pasture, parasite ova were observed in their feces. Subsequent weekly fecal flotation revealed large numbers of *Strongylus* ova. Seventy-nine days after the lambs had been placed on pasture, they were slaughtered and numerous parasites were found in the gastrointestinal tract.

Fifty days after the 2 cattle had been placed on pasture, ova were observed in the feces of 1 animal, but it was 98 days before ova were observed in the stool of the other animal. Weekly examinations made during the pasture season revealed very few ova in fecal samples collected from either animal.

After being removed from pasture the cattle were slaughtered and the entire gastrointestinal tracts removed. Two *Cooperia curticei* were found in the steer and one *Cooperia oncophora* in the heifer. Large numbers of nodules were found in the walls of the intestine and cecum.

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Outbreaks of Q Fever

The outbreak of a mysterious illness among a certain group of sheep butchers at a Chicago packing plant in August was recognized as Q fever, a disease occurring among meat workers in Queensland, and recently reported as having occurred among packinghouse workers at Amarillo, Texas (*Pub. Health Rep.*, May 17, 1946). Q fever is an acute, explosive illness varying from mild, influenza-like attacks to severe cases of atypical pneumonia. The Office of The Surgeon General of the Army (*Am. J. Pub. Health*, July, 1946) reports scattered outbreaks of Q fever among American troops in Italy, Corsica, and Greece. It has been found to be caused by a very small *Rickettsia* and has been called Balkan gripe.

Trypanocide for Dourine— Phenyl Arsenoxides

During investigational work on the chemotherapy of human cases of sleeping sickness (*Trypanosoma gambiense* infection) in Africa, Eagle, Hogan, Doak, and Steinman (cited by the *Journal of the American Medical Association*) tested the trypanocide properties of phenyl arsenoxides on experimentally induced dourine (*Trypanosoma equiperdum* infection) in mice and rabbits and thereby demonstrated a therapeutic activity that might be of considerable interest in veterinary medicine for, if this country seems to rest serenely contented about "equine syphilis," other parts of the world are still concerned about that plague. In any event, the definite results obtained in formerly incurable sleeping sickness leaves the chemotherapy of dourine open for investigation.

Brucella Abortus Vaccine (Strain 19) Desiccated by Lyophilization

W. F. VERWEY, D.Sc., and S. F. SCHEIDY, V.M.D.

Glenolden, Pennsylvania

THE CALFHOOD vaccination program for the control of contagious abortion in cattle is now well established, and it has been amply demonstrated in numerous studies under experimental and field conditions that favorable results may be expected from its wide application.¹⁻⁵ Recently, this program has been extended to permit, under certain conditions, the vaccination of adult animals. Since the efficacy of *Br. abortus* vaccine depends upon the presence in the vaccine of living *Br. abortus* organisms of low virulence, but high antigenicity for cattle, it is essential that the vaccine contain a maximal number of living organisms at the time it is used. The usual vaccine, as prepared in accordance with the U. S. Bureau of Animal Industry regulations, is a saline suspension of living *Br. abortus* (strain 19) organisms that is adjusted to a standard turbidity and contains at least 10,000 million viable organisms per cubic centimeter at the time of its release. From the date of release to the time of actual use, however, the proportion of viable organisms in the suspension continually decreases. If the vaccine is kept refrigerated at all times and is handled very carefully during transportation, the death rate is not excessive but, even under relatively good conditions, the liquid vaccine cannot be trusted to have a satisfactory viability much beyond three months. This has resulted recently in a decrease in the dating period of liquid *Br. abortus* vaccine from six months to three months. Although many lots of vaccine will maintain satisfactory bacterial counts for a period of six months, there have been a sufficient number of instances where viability has been lost during this time to make the above mentioned change in dating necessary. Various factors other than the time of storage may reduce drastically the number of living organisms in a liquid vaccine. Love and Mingle⁶ have

reported that exposure to temperatures above 45 F. leads to an accelerated loss of viability, and Mitchell and Moore⁷ feel that agitation, such as that resulting from automobile transportation, also may decrease the number of living bacteria. It is now generally recognized that if the liquid vaccine is exposed to high summer temperatures for even a few hours there is the definite possibility of sufficient loss of viability to render ineffective vaccination with such a product. These limitations on the transportation and use of the liquid product may cause serious difficulties in the field since, frequently, it is impractical or even impossible to maintain satisfactory conditions during transport of the vaccine from the office of the veterinarian to its point of actual use, which may be many miles and many hours away. In addition, with a product that is as sensitive as liquid *Br. abortus* vaccine, the veterinarian is forced to place much reliance on the knowledge and good faith of the individuals who handle the vaccine before it reaches him. The veterinarian has no choice but to assume that the vaccine was kept refrigerated by the manufacturer, transportation agency, and distributor before it arrived in his hands. Unfortunately, he has no practical method of determining before use whether a vaccine that he receives is satisfactory or unsatisfactory. Too frequently, the first indication that a vaccine has not been satisfactory is the report of "immunization breaks" among cattle supposedly immunized.

It has been realized for some time that there exists a need for a more stable form of this vaccine. It occurred to us, therefore, that desiccation from the frozen state by means of lyophilization might offer a satisfactory means for stabilizing *Br. abortus* vaccine. Accordingly, experimental work directed toward the development of a lyophilized vaccine was undertaken. This work was practically completed about three years ago, and the product has been available commercially for about a year. The experi-

From the Medical Research Division, Sharp & Dohme, Inc., Glenolden, Pa.

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mental work that resulted in the development of this vaccine has already been reported in detail⁸ and will not be repeated here. It is sufficient to say that the mere desiccation of the standard liquid vaccine was completely unsatisfactory and that it was found necessary, in order to prepare a vaccine suitable for use, to add skimmilk as a stabilizing agent. Bovine serum also was found to be relatively satisfactory as a stabilizer, but vaccines prepared with bovine serum were not as stable as those prepared with skimmilk. The important principle upon which this product is based is the use of the lyophile technique, which has found such wide application in the preparation of numerous biological products. This procedure made possible the preparation of dried, human plasma which is now used in the preservation of penicillin. It has been found that when unstable biological materials are frozen at the temperature of dry ice and are then subjected to extremely high vacuum, the water is drawn from the material directly from the ice phase without passing through a liquid stage. This vaporization of a solid to a gas is known as "sublimation" and, when the procedure is used, many materials that

normally would be destroyed or inactivated by drying from the liquid phase are well preserved. Using this technique of lyophilization, it was found possible to dry living bacteria and keep them for long periods in the dried state, with little loss of viability when they were resuspended in water. This is essentially what has been done with *Br. abortus* vaccine.

PROCEDURE

It might be of interest to outline the steps in the manufacture of *Br. abortus* vaccine (desiccated) to give a clear understanding of the nature of the product. Its manufacture begins in a manner identical with that of the liquid product. *Br. abortus*, strain 19, is inoculated into Blake bottles containing a suitable agar culture medium. After the inoculum is spread over the surface of the agar, these bottles then are incubated for several days at 37°C. During that time, the organisms multiply and a film of *Br. abortus* is observable on the surface of the agar. A small quantity of a salt solution is then placed in each bottle, and these organisms are washed from the agar and suspended in the saline solution. This



Vial on the left contains lyophilized vaccine; vial in the center contains sterile diluent; vial on the right contains restored vaccine.

step is carried out only after inspection to make sure that the individual bottles do not contain any observable contaminating organisms. The *Brucella* suspension from each bottle is collected and pooled with the suspensions from other bottles. After pooling and further tests to make sure that the pooled suspension is free of contaminants, the suspension is adjusted to the required density by means of a photoelectric turbidimeter. Inasmuch as the desiccation itself kills a proportion of the organisms, the actual number of bacteria in the suspension is adjusted so that the vaccine will contain approximately twice the number of organisms found in the usual *Br. abortus* vaccine. Once desiccation is complete, however, the organisms that survive seem to be completely stable and retain their viability. After the suspension is adjusted for density, it is mixed with an equal quantity of sterile skimmilk and filled into vials. These are then frozen rapidly in a dry ice and alcohol freezing mixture, and the opening of the vial is covered with a filter that excludes bacteria but still permits water vapor to leave the container. The frozen vaccine is placed in trays and placed in the lyophilizing cabinets. The doors are closed and an extremely high vacuum is drawn on the whole cabinet. The water vapor that is drawn from the frozen material is carried out through large pipes and subsequently disposed of in a condenser. After desiccation, which requires between two and four days, the vials of dried vaccine are removed from the cabinets and sealed under vacuum by means of a rubber stopper, over which an aluminum seal is applied under high pressure. This procedure maintains the vacuum within the bottle and, under these conditions, the vaccine will remain relatively unchanged for long periods of time.

Testing.—Finished containers are taken at random to be checked for purity and viability count, and samples are submitted for release by the U. S. Bureau of Animal Industry. The viability count of this product is determined by making appropriate dilutions of the vaccine and plating these dilutions in tryptose agar plates. On incubation of the Petri dishes, the viable organisms give rise to small colonies within the agar that can be counted readily. The number of colonies per plate multiplied by the dilution that was used gives the number

of living organisms per cubic centimeter of vaccine. The U. S. Bureau of Animal Industry requires this to be 10,000 million or more.

Restoration and Use.—To restore the desiccated vaccine to the liquid state, the diluent is withdrawn from its bottle by means of a hypodermic syringe and is transferred to the vial containing the vaccine. Within a few seconds, the dried vaccine will dissolve and suspend evenly in the diluent. This restored vaccine then is ready for use, and from this point on is handled in the same manner as is the usual liquid vaccine. It is plain from this review that considerably more material and labor are necessary to prepare the desiccated product than to prepare the liquid vaccine, but the additional stability and reliability of the dried product make the extra effort worthwhile.

Stability.—Experiments designed to measure the stability of this lyophilized vaccine over relatively long periods at refrigerator temperature, room temperature, and approximately 100 F. have been carried out. Vaccines prepared by this method have been found to be satisfactorily stable at refrigerator temperature and at room temperature for at least three years. These stability tests still are going on, so that it is impossible to say what the limits eventually will be. Stability during constant exposure to approximately 100 F. is somewhat less than at room temperature or refrigerator temperature, but the data indicate that the product will withstand this temperature for at least six months. Experiments were performed to determine the effect of relatively short-term exposure to excessive temperatures. These indicate that the vaccine may be exposed to temperatures up to 122 F. for two days with only a slight loss of viability. Experiments also show that vibration, such as that produced in transportation, has no effect on this product. These experimental results should not be construed as an invitation to abuse this product, particularly since all the information available indicates that the desiccated vaccine is best stored in a manner that protects it from heat. It is of practical importance, however, that this product is so designed that it is able to withstand exposure to temperatures that are likely to occur in the field. In general, the duration of abuse to which this product has

been subjected in the laboratory is much in excess of that normally received in the field, and it is reassuring to know that there is a margin of safety.

SUMMARY

Desiccation by lyophilization affords a satisfactory method for preserving and maintaining *Brucella abortus* vaccine (strain 19) in a viable state.

A description of the procedure for preparing, testing, and restoring the vaccine to the liquid state has been given.

A few results on stability of the vaccine at various temperatures and under different conditions have been discussed.

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Ketosis in Dairy Cattle

Thiamin hydrochloride, orally or intravenously, was ineffective in treating acetonemia in lactating cows when administered alone or with nicotinic acid, calcium pantothenate, riboflavin, pyridoxine, choline, paraaminobenzoic acid, and biotin, in tests conducted by Dr. J. C. Shaw (*J. Dairy Sci.*, March, 1946).

Administration of available carbohydrates was found to be the only dependable treatment. The efficacy of glucose was not enhanced by administration of thiamin hydrochloride, riboflavin, pyridoxine, nicotinic acid, and calcium pantothenate.

Methionine was ineffective, orally or intravenously.

Many cases of ketosis probably result from fasting, so that the feeding of avail-

able carbohydrate before onset of the trouble is not a dependable method of avoiding it. Insufficient energy intake must be presumed to be an important causative factor.

At the onset of the condition, there is a marked decrease in milk flow and, consequently, a greatly reduced demand for energy. Because of this reaction, it is probable that a majority of cows with ketosis would recover without treatment, and this fact emphasizes the need for caution in drawing conclusions from a few treatments. A few cases do recover quickly without treatment, but many more are slow about showing improvement.

No specific deficiency was recognized other than an abnormally reduced intake of total energy. Therefore, the remedy lies in supplying carbohydrate and in stimulating the appetite so that the voluntary intake of energy will be increased.

Gastrointestinal Lavage, Vice Versa

During the 1920's, when small animal practice was rapidly replacing equine medicine in the big urban centers, the literature was profuse with reports on the technique and indications for washing out the alimentary canal of dogs, anus to mouth. Everybody was doing it, and the impression left in the mind of the casual reader was that something new had been brought into the canine clinic. One combs in vain the books on the dog written in the nineteenth and twentieth centuries (Stonehenge, Mills, French, Mueller, Glass) for information on the origin of the procedure. Information on that point would be good clinical history.

The other day, in gleanings nineteenth century journals for clinical reports, a short article was found entitled "A Rapid Method of Emptying the Stomach in Case of Poisoning," by John Blattenberg, V.S., of Lima, Ohio (*Am. Vet. Rev.*, 21, (Jan., 1898): 701-702), which thoroughly describes the procedure in dogs and cats. The doctor used the equine enema syringe for large dogs and the bulb syringe for toys and cats, and adds: "In forty seconds to one minute, I have forced water completely through the alimentary canal and thoroughly washed out the stomach." Mention is made of having used the method for several years instead of emetics. Is this a "First?"

The Use of Anthelmintics with Wild Species of Sheep and Goats

R. D. TURK, D.V.M., M.S.; B. L. WARWICK, D.V.M., Ph.D.; and R. O. BERRY, Ph.D.

College Station, Texas

TREATMENT OF WILD ANIMALS maintained in captivity is beset with many difficulties. These difficulties include the questions of restraint and method of administration of the drug selected, as well as the possible toxicity of the drug for the species in question. Wild herbivorous animals have many internal parasites in common with domestic species but are rarely treated, on the assumption that a moderate parasitic infection will do less harm than the dangers incident to the administration of medicinal agents. In those instances where medication is deemed advisable, the dosage is usually determined from that recommended for the more closely related domestic species, although it is common knowledge that the action of a drug varies widely in different species.

The sub-family *Caprinae* includes all domestic sheep and domestic goats and many wild species. A few wild animals belonging to this sub-family have been kept at this station for a number of years in connection with genetic experiments. The species are mouflon (*Ovis musimon*), Barbary or aoudad (*Ammotragus lervia*), and Himalayan tahr (*Hemitragus jemlahicus*). Because of conditions favorable to parasitism, these animals have been more or less regularly treated with anthelmintics used for domestic species. Prior to the use of phenothiazine, the drugs most commonly used with the domestic species were copper sulphate, either alone or combined with nicotine sulphate, and tetrachlorethylene. The copper sulphate solution or the copper sulphate-nicotine sulphate solution is administered as a drench. The tetrachlorethylene is usually given in soluble elastic gelatin capsules. Sometimes we gave the copper

sulphate-nicotine sulphate solution to mouflons with no untoward effects. Capsules of tetrachlorethylene were usually given to animals of each of the wild species, capsules being preferred to a drench, because of the lessened danger of inhalation pneumonia. Recognizing the fact that neither of these treatments was completely effective, it was decided to give animals of the wild species alternate treatments of copper sulphate-nicotine sulphate and tetrachlorethylene. The copper sulphate-nicotine sulphate was administered by stomach tube to minimize the danger of inhalation pneumonia, as some animals of these species struggle and offer extreme resistance to being drenched.

On July 25, 1941, copper sulphate-nicotine sulphate solution was administered as a drench to 24 mature domestic goats and 200 domestic sheep. This preparation, which contained 1.75 per cent copper sulphate and 0.8 per cent of a 40 per cent nicotine sulphate in water and used in dosage of 1cc. per pound of body weight was also administered by stomach tube to 1 aged mouflon ewe, 1, 3/4 mouflon 1/4 domestic yearling ram, 1 male and 1 female Barbary yearling, and to 2 adult Barbary males, in the order given. No ill effect from the treatment was noted with either the mouflon or the mouflon hybrid, but during the treatment of the last Barbary sheep, it was noted that the male yearling Barbary had collapsed, and the female Barbary was showing symptoms of extreme intoxication. Therefore, treatment was stopped, with only a half given. The symptoms were typical of those commonly associated with nicotine poisoning. An attempt was made to counteract the effect of the nicotine by the administration of strong black coffee within the hour. The male died without regaining consciousness, and the negative findings at autopsy indicated that the diagnosis of nicotine poisoning was valid. The female revived but never fully recovered, dying on the sixth day. The adult Barbary sheep which received the full dose showed slight symptoms of intoxication but made an uneventful recovery.

Dr. Turk is Head of the Department of Veterinary Parasitology, School of Veterinary Medicine; Dr. Warwick is Animal Geneticist, Agricultural Experiment Station, and Dr. Berry is Associate Geneticist, Agricultural Experiment Station, A. and M. College of Texas, College Station.

The earlier portion of these experiments was conducted while the senior author was a member of the staff of the Division of Veterinary Science, Texas Agricultural Experiment Station.

The one receiving the half dose showed no apparent ill effect. No antidote was given to either of these animals.

For obvious reasons, the tahrs which were scheduled to be treated next did not receive the copper sulphate-nicotine sulphate solution.

It has been generally accepted that domes-

TABLE 1.—Results of Treating Animals of Sub-Family Caprinae with Copper Sulphate-Nicotine Sulphate Solution on July 25, 1941

Species	No. of animals	No. affected	No. died
Domestic goat	24	0	0
<i>Capra hircus</i>			
Domestic sheep	200	0	0
<i>Ovis aries</i>			
Mouflon adult	1	0	0
<i>Ovis musimon</i>			
Hybrid yearling (3/4 <i>O. musimon</i> 1/4 <i>O. aries</i>)	1	0	0
Barbary adults	2	1	0
<i>Ammotragus lervia</i>			
Barbary yearlings	2	2	2
<i>Ammotragus lervia</i>			

tic goats are more susceptible to toxic effects of nicotine than are domestic sheep. Our own observations support this. The mouflon is one of the species of true sheep (*Ovis*). The Barbary sheep (so-called) formerly was classified by taxonomists in the same genus. At the present time, classification in a separate genus (*Ammotragus*) is accepted. We have evidence which will be presented in another publication, indicating that this species is more closely related to goats (*Capra*) than to sheep (*Ovis*). The reaction to nicotine would tend to substantiate this.

After the efficiency and apparent safety of phenothiazine when used as an anthelmintic in domestic sheep and goats was

established, we used it routinely in our experimental flocks. However, in the absence of specific information relative to the toxicity of phenothiazine with the wild species, we refrained from using it with these species until we were in position to check this question. For the purpose of securing suitable testicular tissue for cytologic studies, certain animals were castrated. As these animals were of no further value for genetic or cytologic studies, 3 which became available were used to make a preliminary test for toxicity of phenothiazine for the three species.

Phenothiazine was administered by stomach tube. Bentonite was the agent used for putting it into suspension in water. The initial dose was 0.25 Gm. of phenothiazine per pound of body weight. This is the dosage widely used with domestic sheep and goats. The succeeding five doses given at intervals of two weeks or more were increased by 0.25 Gm. per pound of body weight each time. After the sixth treatment with no noticeable toxicity, doses ten times the usual dosage were used. After the initial treatments of the wild species, 1 adult domestic goat and 1 adult domestic sheep were included each time as control. No evidence of toxicity was noted in any case.

Phenothiazine has been reported to be toxic under some conditions for certain herbivorous animals, especially the horse^{1,2}, but is generally considered to be virtually nontoxic to domestic sheep and goats except in late pregnancy³, when it may produce abortion. This report gives added evidence for the nontoxicity of phenothiazine for domestic sheep and goats. Limited data included indicate that phenothiazine is also virtually non-toxic for three wild species of the same sub-family.

TABLE 2.—Toxicity Tests of Phenothiazine with Five Species of Caprinae

Dates (1945)	Species									
	<i>Ovis musimon</i>		<i>Ammotragus lervia</i>		<i>Hemitragus jemlahicus</i>		<i>Capra hircus</i>		<i>Ovis aries</i>	
	Weight lb.	Dosage Gm.	Weight lb.	Dosage Gm.	Weight lb.	Dosage Gm.	Weight lb.	Dosage Gm.	Weight lb.	Dosage Gm.
June 22	82	20.50	160	40.00	128	32.00	..	..	..	..
July 7	86	43.00	172	86.00	127	63.50	63	31.50	119	59.50
July 20	85	63.75	170	127.50	125	93.75	56	42.00	114	85.50
Aug. 3	84	84.00	170	170.00	126	126.00	67	67.00	121	121.00
Aug. 24	84	105.00	165	206.25	127	168.75	70	87.50	119	148.75
Sept. 14	83	124.50	174	261.00	127	190.50	64	96.00	112	168.00
Nov. 26	87	217.50	166	415.00	134	335.00	61	152.50	111	277.50

Results: No symptoms were detected following any of the dosages.

SUMMARY AND CONCLUSIONS

Wild species of sheep and goats have been treated with three anthelmintics commonly used with domestic sheep and goats. Tetra-chlorethylene in the usually recommended dosages was nontoxic to mouflon (*Ovis musimon*), Barbary (*Ammotragus lervia*), and Himalayan tahr (*Hemitragus jemlahicus*) species. Nicotine sulphate combined with copper sulphate in solution was toxic to a Barbary but not to a mouflon, in the usual dosages. Himalayan tahrs were not treated with this anthelmintic solution. Phenothiazine proved nontoxic to the three species noted above, as well as to domestic sheep and domestic goats, even when ten times the usual dosage was used.

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Pruritic Rabies

A case of atypical rabies in a Great Dane female, 2 1/2 years old, presenting the clinical picture of Aujesky's disease (mad itch) is described by Bailly in a current issue of the *Bulletin de l'Académie Vétérinaire* (May, 1946). The first symptoms were periodic contractures of the dorso-lumbar muscles, with arching of the back, which were of short duration but repeated several times during the first day. Except for this attitude, everything was normal. On the second day the contractures were more frequent but did not appear to be painful. However, an alarming pruritus developed around the pudendum that took on the character of automutilation. The skin of the thigh, hip, and perineum became red, tumefied, congested, and oozing from the self-inflicted injury. Casual observation of the dog's determination to sink its teeth into the pruritic region readily revealed the serious nature of the trouble. The itching appeared to be unbearable. There was neither aggressiveness nor agitation. The dog would respond to calls and showed normal interest in her owner. As the itching spells became more frequent, posterior weakness became apparent from partial im-

potence of the gluteal musculature. The affected region did not spread and was constantly attacked with the teeth even after the paraplegia had augmented. The head, neck, and front legs were coördinate. No agitation, no irritability, no aggressiveness developed during the entire course of forty-eight hours. Food was refused but water was drunk copiously and with visible satisfaction. The countenance expressed resignation rather than agony. Death occurred during the night (morning of the third day).

Summarized, the case is one of rabies developed in the absence of any contact with any rabid dog. (The bitch had been raised under constant supervision.) Except for the appearance of paraplegia toward the end, pruritus was the dominating symptom. The characteristic mental aberration was totally absent. The course was swift (two days).

The autopsy revealed: thoracic organs normal, stomach empty, duodenum not congested, bladder ruptured from overloading, urine discharged into the peritoneal cavity, glucosuria, slight softening of the cerebrospinal axis, oxyphilous inclusions, negative.

The diagnosis of rabies was made by animal inoculation. One gram of material taken from the horn of Ammon and emulsified in 50 cc. of normal saline solution caused furious rabies in 2 mice, 1 rat, and 1 rabbit, whose brains were found to be rich in Negri bodies.

Quoting the author's conclusion: "The dog died of rabies and that rabies was caused by a reinforced virus. Rabies in the dog can, therefore, take the aspect of a baffling pruritus that persists to the end, in the total absence of the essential symptoms."

Penicillin in Mastitis

It would appear that penicillin is not rapidly destroyed in the bovine mammary gland. The concentration present twelve hours after infusion of 25,000 Oxford units is adequate to exert its antibacterial effect, says Dr. W. G. Stevenson (*Canad. J. Comp. Med. and Vet. Sci.*, March, 1946). Inasmuch as that amount of penicillin persists for twelve hours, the author suggests that longer intervals between infusions may be satisfactory in cows that are dry or giving but a few pounds of milk daily.

A Case of Pasteurella Endocarditis in a Pig

J. H. SAUTTER, D.V.M., B. S. POMEROY, D.V.M., and R. FENSTERMACHER, D.V.M.
St. Paul, Minnesota

A sow weighing about 350 lb. was brought to the Diagnosis Laboratory, Veterinary Division, University of Minnesota, for autopsy. Prior to her arrival, she had been ill for about two weeks during which time she maintained a constantly high temperature of 106 F. She had been serum-virus treated eight months previously. When presented for autopsy, the symptoms noted were inability to walk, cold extremities, and marked cyanosis of the mucous membranes and ventral portions of the body. Breathing was open-mouth, rapid, and shallow. The total leucocyte count was 31,800.

Previous to this, no report of Pasteurella endocarditis has been found in the litera-

ture, but an exhaustive search was not made. Numerous statements were found, however, in which the *Pasteurella* spp. tended to localize in various anatomical locations. Outstanding examples of these were pericarditis, arthritis, splenitis, and enteritis. Murray and McNutt report *Pasteurella* endocarditis in a lamb. Cases have been reported in which *Pasteurella* was thought to be the causative organism of endocarditis in the dog and horse. It is not difficult to conceive of this organism as a cause of endocarditis due to its peculiar tendency to localize in different parts of the body.

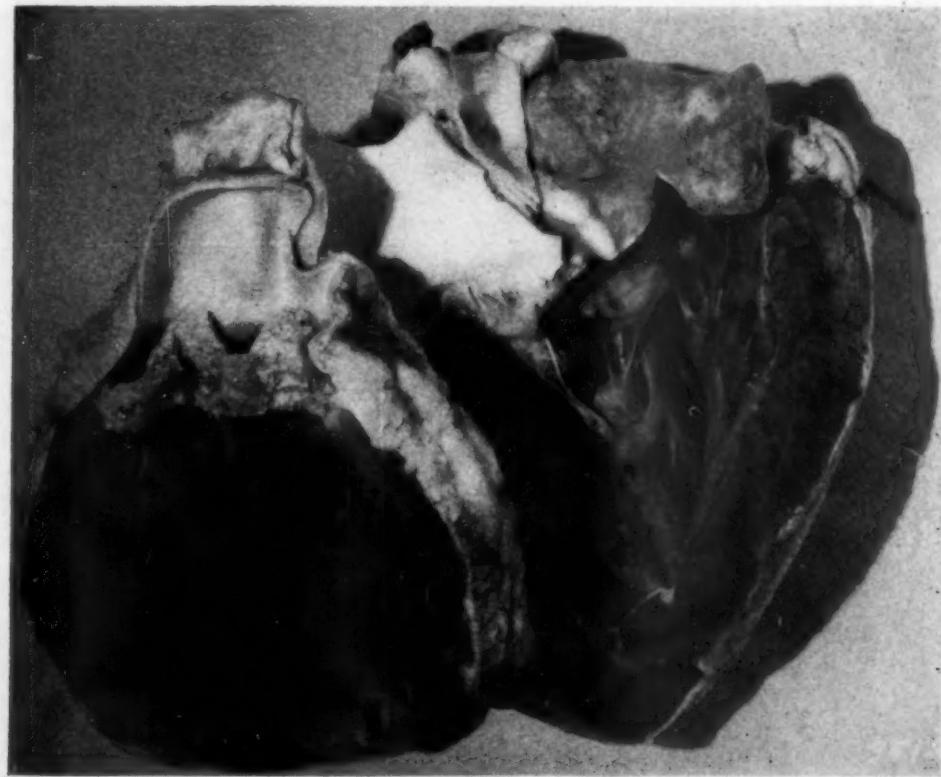


Fig. 1—Pulmonary valve showing vegetative endocarditis.

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The authors are from the Veterinary Division, University of Minnesota, St. Paul.

POSTMORTEM FINDINGS

The lungs were congested and edematous, but signs of a bronchial pneumonia were absent. Petechiae were present in the

larynx, on the pericardium and epicardial fat. Fibrinous pericarditis involved the right auricle and a portion of the right ventricle. A marked vegetative endocarditis was found on the pulmonary valve (*see fig. 1*). The entire valve was involved with the exception of the free margins of two of the leaflets. The vegetations were fairly firm, small, and multiple, involving the entire thickness of the valve but not extending onto the endocardium. All other valves were normal. The myocardium was flabby but no gross changes were noted.

Microscopic study of a portion of one of the most seriously affected valves showed a central necrosis surrounded by a zone of polymorphonuclear leucocytes, lymphocytes, and mononuclear cells. Around the necrotic areas, there was connective tissue proliferation which extended into the leaflet but was most marked at the base of the valve. A marked fibrinoid reaction (*see fig. 2*),

similar to that observed in human rheumatic endocarditis, was noted near the free margin of the involved leaflet. Cellular activity was scant around the fibrinoid material. The surface of the valves was covered extensively with fibrin thrombi.

Macroscopically, the myocardium appeared normal but microscopic examination revealed a marked leucocytic infiltration. Polymorphonuclear cells, lymphocytes, and mononuclear cells of various types were scattered diffusely throughout the muscle.

The spleen was enlarged, soft, and dark red. Microscopically, the pulp cords were congested and the sinusoids narrow, both containing large numbers of polymorphonuclears, lymphocytes, and mononuclears. The splenic pulp was hyperplastic and the follicles less prominent than normal.

Grossly, the liver was congested. Microscopically, there were scattered foci of mononuclear leucocytes; the liver cells in these

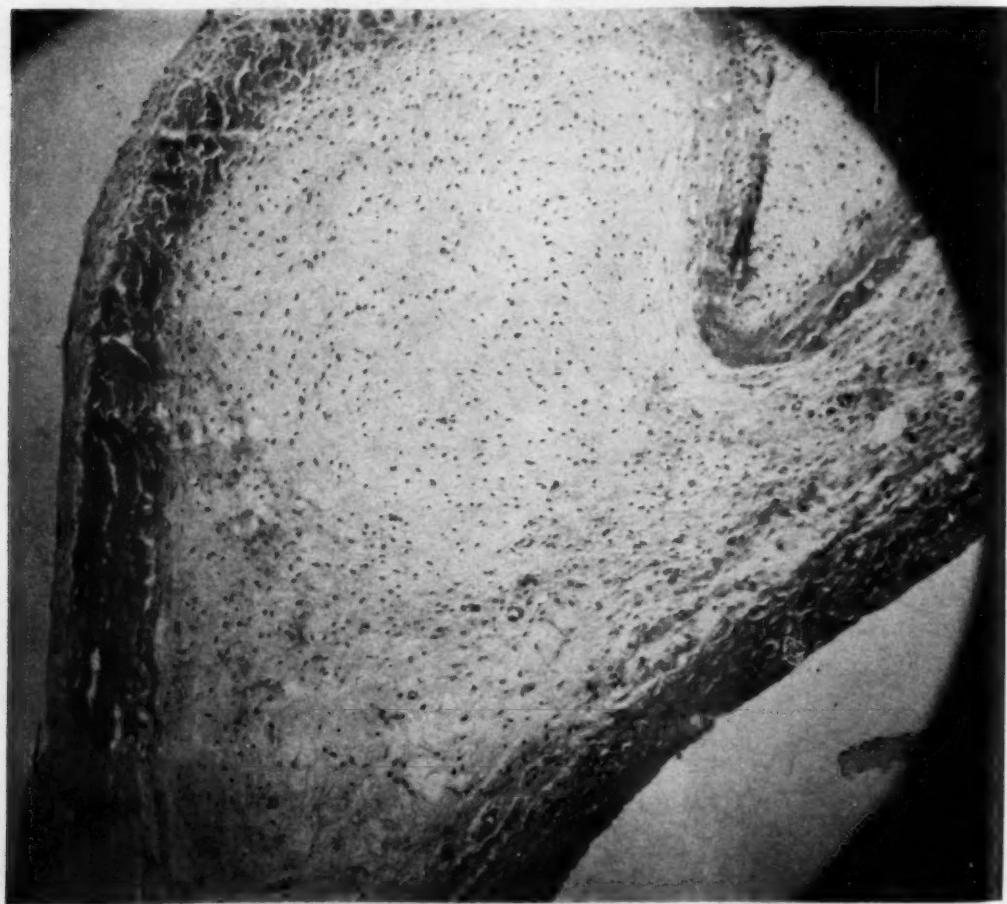


Fig. 2—Fibrinoid reaction near margin of leaflet. $\times 100$.

areas were undergoing degeneration and necrosis.

The kidneys grossly were cloudy and pale with scattered petechial hemorrhages on the capsule. Microscopically, the glomeruli contained large numbers of polymorphonuclear cells and a few lymphocytes. The capillary loops appeared broken, and the epithelial cells of the parietal and visceral layers of Bowman's capsule were thickened and pale, but the nuclei remained intact and normal in appearance.

The proximal and distal convoluted tubules both showed evidence of damage. The cytoplasm of the tubular cells was granular and, in many places, the superficial portion of the cells was sloughed; on numerous occasions the entire cells were desquamated. Some of the tubules contained casts. The interstitial tissue throughout the cortex and medulla contained numerous beginning abscesses. The over-all picture in the kidney was one of the embolic glomerulonephritis. The lymph nodes of involved organs and gastrointestinal tract had hemorrhagic borders.

BACTERIOLOGY

Preliminary isolations were made from the pulmonary valve and the spleen on serum-agar slants. These resulted in a luxuriant growth in twenty-four hours. Stained smears of the organism revealed a small gram-negative rod. Preliminary carbohydrate inoculation from broth cultures gave the following reactions: Acid was produced in mannite, dextrose, and sucrose; maltose and lactose were negative. Bipolar staining organisms were demonstrated by using Wright's stain and also with methylene blue.

A guinea pig was inoculated with 0.2 cc. of a 24-hour broth culture intraperitoneally. The animal was dead at the end of forty-eight hours. Reisolation was made from the guinea pig on agar slants and stained smears revealed the presence of gram-negative rods. Carbohydrate reactions were similar to those stated above.

Eighteen-hour broth cultures inoculated into other carbohydrates gave the following reactions: Acid was produced in galactose, sorbitol, and trehalose; d-xylose, L-xylose, dulcitol, inositol, rhamnose, inulin, raffinose, salicin, arabinose, and maltose were negative. The nitrate test was weakly positive; indol was positive. Voges-Proskauer and methyl red tests were negative.

Gram staining of tissue sections from the heart valve revealed myriads of gram-negative organisms resembling Pasteurella.

SEROLOGY

Antigen was produced by incubating the cultures twenty-four hours in nutrient broth, centrifuging, and resuspending the organisms in phenolized saline. The serum used was obtained from a rabbit which had been previously inoculated with an avian strain of the Pasteurella organism. Agglutination tests were positive at dilutions of 1:25, 1:50, and 1:100. Controls were run in all tests.

According to Bergey's *Manual of Determinative Bacteriology*, this organism falls in the class of *Pasteurella suis* on the basis of the indol and carbohydrate reactions.

SUMMARY

Since pasteurellosis in swine is usually attended with a bronchopneumonia, this case is atypical in that the lungs were not involved. The outstanding gross lesions were vegetative endocarditis and evidence of a septicemia. This case is reviewed with the purpose in mind of aiding in the differential diagnosis of other septicemic diseases which clinically and on postmortem examination resemble hog cholera, swine erysipelas, streptococcal septicemia, and acute salmonellosis.

Tetanus Toxin Isolated

Dr. Louis Pillemeyer, Western Reserve University, and two of his graduate students have succeeded in isolating tetanus toxin in pure form. When treated with formaldehyde, this pure toxin makes a toxoid which has no unfavorable side reactions.

Fowlpox

On farms where fowlpox has previously been a problem, it is good insurance to vaccinate young birds at least two months before they will begin to lay, animal pathologists at the University of Illinois warn. They also caution that the vaccine should not be used in clean flocks in communities where the disease has not been known in previous years.

Every 100 chicks need a feeder 4 ft. long and open on both sides.

Demodex Canis in Normal Dogs

It has long been known that *Demodex canis* can be isolated from clinically normal dogs but the number present per given area had not been counted. In a study of 91 normal dogs, Unsworth (*J. Comp. Path. & Therap.*, April, 1946) found the parasite in 9 (10%). In each of the 9 dogs, the parasite was harbored in the skin of the eyelids and in 4 in the nose also, the usual sites where the dermatitis first appears. In 4 clinically normal animals, the number of parasites per 0.1 Gm. of skin varied from 3 to 42, and on 1 dog, probably immune from age, the number counted was 1,120, an amassment that would probably have caused lesions in a younger animal. By comparison, in 6 dogs affected with demodicetic mange, the number of the mites per 0.1 Gm. of skin varied from 399 to 7,100, in counts made by a dilution method. In the dog showing but 399, the slight lesion resolved spontaneously. The author adds that the number in older dogs, clinically normal, may be considerably higher, and that carrier dogs doubtless play a part in the epizoöiology of this type of acariasis.

A Practical Test of DDT

While there is no lack of experimental information on the insecticide power of DDT against flies, reports of its use on given farms are not so numerous.

Trials made and reported by Dr. John G. Matthysso, New York entomologist, (*Certified Milk*, January, 1946) disclose the measured results obtained in the reduction of the fly population at the Walker-Gordon rotolactor plant and farms in New Jersey and appear to have significant value. The drug was used at the strength of 4 lb. of DDT to 100 gal. of water, sprayed with an orchard pressure sprayer. The spray was used in 11 areas of the rotolactor building and at six outlying farms. One farm was used as a check. The first spraying of the rotolactor plant was made May 2, 1945, with a solution of 2 lb. per 100 gal. In forty-eight days—June 19—there was a total of but 81 flies in the 11 areas. A second spraying August 3 with a solution of 4 lb. per 100 gal.

again reduced the fly population to almost zero.

The six farm buildings sprayed July 31 to August 2 contained 104 flies per 10 cows. Immediately after (August 3), there were but 2 flies per 10 cows, a reduction of 98 per cent. By September 19, the height of the fly season, 4 flies per cow were counted, compared with hundreds per cow without spraying. Thus, it was shown that two DDT sprayings at the strength mentioned, would take care of flies until the arrival of frost. On October 3, after a frost, there were 5 flies per every 10 cows. The trial actually comprised 31 barns and 1,550 cows. At the control barn, the fly population ran high. In June, it showed 160 flies on five windows, 100 on a manure truck, and 144 on eight posts.

Other details of this comprehensive report are given, but the ones (*ut supra*) indicate what may be expected of DDT in clinical veterinary medicine.

Penicillin in Anthrax

Though septicemic anthrax of farm animals, from the clinical perspective, must be sharply distinguished for the carbuncular anthrax of the human being, the response of *Bacillus anthracis* to penicillin therapy is nevertheless something to follow to its ultimate conclusion. In human anthrax, the organism does not always get into the blood. It is more effectively blocked at the site of entrance. Anthrax has been a threat to animal production since ancient times and its virulence and potentiality are not recessive. Striking at the disease with every weapon developed where outbreaks occur is a "must do" in veterinary medicine. The livability of anthrax spores on pasture ground is also a hazard to be considered in the over-all production of cattle and sheep.

The new electron photographs of the virus molecule by Williams and Wyckoff, University of Michigan, (*JOURNAL*, (August, 1946) : 137) suggest that the morphology of this erstwhile invisible element substance/creature/microbe, or what have you is a better organized biological unit than one would have been previously justified in believing. Seems like lifting the curtain of a new world.

NUTRITION

Danger From Moldy Feed?

The advisability of feeding moldy feed—either grain or hay—has been the subject of much discussion, but very little definite work has been done to substantiate an opinion for or against the practice. In *Feed-stuffs* (May, 1946), Mr. Lyman Peck reviews the entire subject, and quotes authoritatively from numerous sources. He points out that the finding of mold spores in the digestive tract of a dead animal or a dead bird does not justify the conclusion that the mold was the primary, or even a contributing, cause of death. A diagnosis of mycosis implies that such molds as were found really were harmful to the host.

As early as 1912, Dr. Robert Graham carried on experiments at the University of Kentucky to determine the effect of feeding molds and moldy feeds to farm animals. These proved that the trouble which had been ascribed to molds was being caused primarily by *Bacillus botulinus* and the toxin which it elaborates. The work led to the production of *botulinus* antitoxin, but did not give a definite answer on the danger from molds and moldy feeds. No ill effects were noted when the molds were fed to horses in the absence of the *botulinus* organism or its toxin.

The South Dakota State College at Brookings reports in its Circular 48 (1945) that Johnson, Johnson, and Wright carried on experiments in which they fed moldy corn to cattle, sheep, and hogs. During a two-year period, soft, moldy corn was fed—color pictures attest to the poor quality of the product being used in the experiments. This soft corn proved to be palatable to cattle and sheep, in fact, when both soft and hard corn were fed, the soft corn was always the first to be consumed. No ill effects were noticed, even when the steers (29) were shifted from full feed of shelled, sound corn and barley to full feed of soft, ear corn. The shift was made in a period of five days and none of the steers went off

feed or showed other ill effects. It was found that 100 lb. of sound shelled corn plus 1 lb. of alfalfa was equal in feeding value to 138 lb. of soft corn, for fattening yearling steers.

Ten yearling sheep were shifted from a full feed of no. 3 corn to a full feed of soft, moldy corn, and then maintained on the moldy corn for six weeks, at which time they were ready for market. None showed any digestive disturbance while on this trial.

When this same corn was fed to hogs it was found that these hogs did not gain quite as rapidly as did those on sound corn. For fattening pigs, 100 lb. of sound ear corn was equal to 130 lb. of soft ear corn plus 1/2 lb. of protein supplement.

In summing up the two years' feeding trials, it was found that hard corn is a superior feed, but that at the prices offered soft corn is worth more to feed than to sell. When fed during the cold winter months, soft corn was 82 per cent as efficient as hard corn for yearling steers, 78 per cent as efficient for lambs, and 76 per cent as efficient for hogs and calves. This efficiency dropped perceptibly when the soft corn was held for feeding during warm weather, but such corn was not noticeably injurious to livestock at any time.

Reports on experiments conducted at the University of Illinois show that pigs self-fed on sound corn, protein supplement, and a mineral gained as much in seventy-seven days as comparable pigs self-fed on soft corn, protein supplement, and a mineral gained in ninety-one days. The average daily gain on hard corn was 1.66 lb. as against 1.44 lb. on the soft corn. Pigs gained 100 lb. in weight on 351 lb. of hard corn and 36 lb. of protein supplement, while it took 421 lb. of soft corn and 68 lb. of protein supplement to produce the same gain. There was no mortality or noticeable illness in the group of pigs fed soft corn, while 1 pig from the other lot died.

Vulvovaginitis is a condition which has been attributed to the feeding of moldy corn, but in none of the feeding trials with moldy corn has it been produced. It apparently is a dietary factor in some instances, because almost invariably a change in the ration corrects much of the trouble. In those instances where moldy corn formed a portion of the ration, the substitution of some other grain improved the condition while, when the vulvovaginitis appeared in pigs being pastured on clover, the removal of the pigs to drylot or to nonclover pasture also led to improvement. And, just to complicate the diagnosis still further, when pigs housed in muddy and insanitary lots developed vulvovaginitis they, too, showed marked recovery from the condition in a short time, when moved to other quarters without an attempt to alter the ration. Until an experiment can be set up which will include a ration that may be expected to produce vulvovaginitis in a reasonable percentage of the experimental animals, there is no conclusive evidence regarding its primary or predisposing causes.

Personal correspondence cited in the aforementioned article indicates that moldy corn has been liberally fed without harmful results. For example, Bohstedt at the University of Wisconsin reports that pigs were turned in a yard stacked thickly with moldy corn in shocks. No ill effects were noted at any time during the several weeks it took the pigs to clean up this corn.

Dr. W. E. Simonsen, Quimby, Iowa, reports that they bought two carloads of moldy corn for feeding purposes. In one car, the corn was so badly molded that half or more of the bags broke while being handled, and the odor was so strong that the trucker objected to handling it. The other car was not so moldy. This corn was fed to some 200 head of cattle and about 500 hogs for several months without the addition of good corn to the ration. Some 20 pigs and 5 cows died during this feeding period, but in no instance did the postmortem examination indicate that mold or moldy feed was a factor in the death.

For the feeding of poultry, moldy corn has been used in many experiments and in many privately owned flocks. One of the early reports appears in *Poultry Science* and was written in 1931 by Ronk and Carrick of Purdue University. They concluded that no apparent deleterious effects resulted

when chicks received moldy corn which was infected with species of *Penicillium*, *Diplodia*, *Fusarium*, *Mucor* or *Rhizopus*, *Aspergillus*, and undetermined organisms including yellow bacteria. Chicks receiving 20 per cent moldy corn and 30 per cent no. 2 corn grew as rapidly as those receiving 50 per cent no. 2 corn; but growth was less satisfactory when 30 or 40 per cent of moldy corn was fed. Apparently, no deaths except possibly one, due to aspergillosis, could be attributed to the moldy corn used in this experiment. Aspergillosis results from inhalation of spores of *Aspergillus fumigatus*, not from their ingestion.

Another letter tells of feeding moldy corn to young growing chicks for a six-weeks' experimental period with no noticeable ill effects.

Water-damaged wheat was fed by Briggs of the University of Maryland and it had no harmful effects on poultry, from a nutritional standpoint, when fed to young chicks, chicks of broiler age, and laying hens.

With all this experimental evidence at hand, what should the veterinarian recommend regarding the feeding of soft, moldy, and damaged corn? Because there are many kinds of molds, and because some of them are known to be harmful, it is well to be guarded in making any recommendation. It is manifestly impossible to subject each lot of suspected feed to detailed study for pathogenicity, but the farmer can easily perform a simple test for himself. By selecting a limited number of animals (the less desirable ones), these can be fed liberal amounts of the suspected feed for a week or ten days. If no harmful effects are noted, a reduced amount of the same grain may be fed to the entire group of animals—mean-time continuing to feed a few animals liberally. When the client is faced with the choice of feeding damaged grain or selling it at a sacrifice, he may be reminded that, if it is fed judiciously, it possesses greater value as a feed than as a cash crop. Only in exceptional cases is it advisable to recommend that a feeder make a practice of buying up soft or moldy corn at reduced prices for feeding purposes. In advising the client with reference to feeding his own soft corn, bear in mind that it should be fed during the winter months and, as a general rule, that it is easier to upset the digestive tract of a horse than that of a

ruminant or a hog. Extra caution is indicated while damaged feed of any kind is being fed, because occasionally there is a cumulative effect and an increasing severity for several days after the initial symptoms appear.

Moldy corn need not be discarded as dangerous or worthless, but neither should it be given an unqualified recommendation. In making a diagnosis of poisoning by moldy feed, do not jump to a conclusion because there is mold present in the digestive tract of a dead animal or bird; but always be sure that there is reasonable evidence to indicate that such mold was a significant factor in causing disease and death.

Cannibalism in Chickens

Many causes of cannibalism have been reported and several treatments recommended with a certain amount of satisfactory results. Permit me to report that, in a few flocks, it has been found to be of definite benefit to have available quantities of suet for those birds to peck at. Then the trouble ceased. — *R. O. Rydell, D.V.M., Wheaton, Minn.*

Thiouracil Saves Feed

Slowing up thyroid activity in hogs with thiouracil to make them less energetic (lazy) was shown to step up gains to a remarkable degree, in trials carried out by Mührer and Hogan at the University of Missouri. The gains in thiouracil-fed hogs were a striking contrast compared with the controls. As a matter of fact, if used longer than twenty-eight days, the experimental hogs became objectionably fat. Says Dr. Mührer, "thiouracil has far-reaching possibilities."

Vitamin E

Alpha tocopherol exerted a sparing action on essential fat acids and pure linolate when added to rations of rats fed on a deficient diet. There was also some sparing of vitamin A and carotene in rats on the same ration, as reported by Hove and Harris (*J. Nutr.*, June 10, 1946), but the feeding of this purified form of vitamin E, without the presence of the essential fat acids, seemed to aggravate the symptoms of fat deficiency in rats on the same diet.

Conversion of Carotene

The body is only one-sixth as competent in converting carotene into vitamin A as has been supposed, according to studies made by Dr. Agnes Fay Morgan and Lillian S. Bentley, of the University of California. It is a mistake to assume that 100 per cent of carotene is so converted. The herbivorous guinea pig, for example, can use vitamin A from animal products six times more efficiently than carotene from greenstuffs. It is possible that this difficulty is greater in omnivorous man; or at least the studies shed light on the unreliability of vegetables as a source of vitamin A in the human dietary. Told in another way, this study accounts to that extent for the superiority of food of animal origin.

Feed Value of Barley and Wheat

Barley was not equal to wheat as a feed for pigs when it constituted more than 50 per cent of the basal ration. Feed utilization was reduced, gains were lower, and feed consumption was reduced. However, when wheat made up more than 50 per cent of the ration, carcass quality was reduced because the pork chop muscle failed to develop, especially in males. It was suggested by one set of trials that restriction of the total digestible nutrients during the fattening period might result in leaner carcasses, regardless of the type of ration fed. — *Nutr. Abstr. and Rev.*, 5, (October, 1945) : 373.

Corn Plant Carotene

The content of carotene in the corn plant is from 20 to 50 per cent higher in the leaves than in the rest of the plant: stalk, ear, husk. The highest concentration is reached at the time the pollen is shedding; then it declines rapidly. Bagging the ear to prevent pollination does not stop the decrease. In most strains, the right time to harvest the most carotene is at the dent stage of maturity. There are differences in the carotene value of individual stalks in both inbred and hybrid corn, but they are not as great as those at the different stages of growth.—*J. W. Potter, F. M. Strong, R. A. Brink, and N. P. Neal: Carotene Content of the Corn Plant, J. Agric. Res.*, 72, (March 1, 1946) : 169-186.

EDITORIAL

Veterinary Corps Extolled

Under the two-column headline "Veterinarian Veterans Boast Great War Rôle," the *Chicago Daily News* (Sept. 18) praises the work done by the Army veterinarians not only while the armed forces were making their gallant stand on Bataan but everywhere in the far-flung corners of the world which saw the Army of the United States in operation. While some were making rigid inspections of "monkey meat and the flesh of the water buffalo," and some were setting the broken legs of mules on the Burma Road, or seeking to solve the lung-plague riddle of Iceland sheep, others, with all the coolness of Pegasus, were attending cargoes of horses being "air lifted" over the Himalayan hump for the troops of China. Pointed out is the fact that despite the mechanization of modern armies, the horse, the mule, the donkey, the homing pigeon and the war dog, and the farm caribou all played their part in the Allied victories. Furthermore, besides forbidding soldiers to touch uninspected food, the Veterinary Corps developed a quick-frozen milk for distant outposts and hospital ships, which held all of its natural flavor and nutritive properties for several months.

The article briefs a sympathetic understanding of the U. S. Army veterinarians in the field, but a few lines on food inspection at the source, in the processing plant, in storage, and in transit over seas and land and jungle under the vicissitudes of extreme climatic condition, would have painted a more complete picture of General R. A. Kelser's command.

Perhaps too often to be polite, and at the risk of seeming offensively egotistical, the JOURNAL has attempted to signalize that the Veterinary Corps of World War II has cut the pattern for a little known segment of human affairs, which the frustrated world ought to look into in the process of reconversion.

That "Man and His Animals" may some

day be the subject of a mighty thesis is not as much of a forlorn hope as it used to be. Its prodrome is looming in the headlines of the press. The man-in-the-street is bothered about the quality of his alimentation and his vanishing calories. That's a good sign for the future of veterinary science which has both the quantitative and qualitative sides of human subsistence to fuss over. While it (v.s.) is perforce a glutton for the spotlight and celebrated headlines, it is man himself who needs to be "wised up" on his daily debt to the animals that enable him to stay here. Elementary as that may seem, lacking those projects designed to promote a faultless and thrifty animal industry is seldom seriously considered until stomachs begin to crave. On that account, every lift the veterinary service receives is truly cosmopolitan education of the fundamental sort.

Fellowships for Veterinarians

The United States Public Health Service is interested in recruiting veterinarians for its ranks, and is prepared to help them qualify for the positions available. Each year, positions are open to veterinarians who have prepared themselves by completing advanced courses in this large and important field and, beginning in 1945, fellowships have been offered which help to defray the cost of this advanced study. An increasing number of veterinarians has expressed a desire to engage in work of a public health nature, and the following announcement affords an opportunity for such persons to hasten realization of their plans:

The United States Public Health Service announces the continuation of the National Institute of Health Research Fellowships which were created in 1945. An increased number of these fellowships will be available during 1946 and 1947.

The National Institute of Health Re-

search Fellowships are awarded to individuals who have had postgraduate work in institutions of recognized standing in the various fields of science allied to public health, as biology, chemistry, physics, entomology, medicine, dentistry, veterinary medicine, etc.

Applications for these fellowships may be made at any time during the year, are acted upon promptly, and are effective for one year from the time of award with a possibility of renewal for a second year.

Junior research fellowships are available to individuals holding master's degrees or to those who have completed an equivalent number of hours of postgraduate study. The stipend is \$2,400 per annum.

Senior research fellowships are available to individuals holding doctorate degrees. The stipend is \$3,000 per annum.

These fellowships will offer an opportunity for study and research in association with highly trained specialists in the candidate's chosen field at the Institute or some other institution of higher learning.

Letters of inquiry should be addressed to The Director, National Institute of Health, Bethesda 14, Md.

Mounting Interest in Small Animal Medicine

The attendance of 450 at the annual meeting of the American Animal Hospital Association at New York City in April shows the direction of the wind in that branch of the service. Not so long ago, such a meeting would have been a washout. No one would have dreamed of reading a paper on dogs before a state association, let alone hold a special meeting for that purpose. The few who ventured to do so on the AVMA programs spoke to unresponsive crowds. This extraordinary meeting was as unforeseeable as the trend itself. Banish the thought that there were not enough dogs nor interest in them to attract veterinarians. Take that one with a grain of salt. There was interest in dogs even before the white man came over, and it never ceased to increase. The truth is that there were both owner interest in dogs and plenty of them before veterinarians began to provide a medical service that owners could afford to patronize. There were hospitals for dogs but, like knowledge of canine medicine, they smelled to high heaven. The cultivated notion that fondness for, and the number of, dogs sud-

denly sprang up after the first World War is just funny, since it all happened at exactly the same time as the diminishing returns from the vanishing importance of the urban horse and mule population. A glance through the society programs of the 1920's shows an almost complete absence of equine subjects and a preponderance of canine and bovine ones. The moral is important, very important. The chain of fine hospitals from coast to coast, the increasing knowledge of canine medicine, surgery, and nursing, and the audience of 450 at a meeting devoted exclusively to small animals, stand out among the untaught lessons of veterinary deontology—the lesson that all there's to do to expand veterinary service is to qualify for the field under development. Stretching ahead are the fields of poultry practice and meat inspection for every community. If these are developed on a scale comparable to small animals practice, the veterinary service of the future will have new dimensions.

Looking Backward

As the population of the world increases so must the ingenuity to produce more food correspondingly increase if the established standards of living are to be maintained and improved. In that incontrovertible principle lie the future obligations of veterinary medicine to man and his animals. Every obstacle put in the path of applied veterinary science is an obstacle to human welfare and, therefore, every year adds to the importance of improving the strength and the discipline of the veterinary service. Looking backward in years to come will measure our present foresight.

Increasing the world population is not a hangover of former centuries. It is an inevitability — a foregone conclusion — no more controlled than controllable, which makes even the most stupid mind consider the fertility of the soil which only farm animals can maintain to the best advantage.

Feeding the dairy cow in America is more an art than a science. Good feeders use roughage and grain to balance each other, poor feeders throw into the manger anything they find convenient and in amounts that are handy.—C. F. Monroe, Ohio Annual Nutrition Conference, Nov. 1-2, 1945.

CURRENT LITERATURE

A Survey of Literature from Holland

[The following material presents a survey of the *Tydschrift voor Diergeneeskunde* beginning with 1940 and extending through the war years. It was prepared by Chas. H. Haasjes, Shelby, Michigan.—The Editors.]

Electric Stimulation.—A study of the effect of passing alternating current through the skulls of animals in the usual manner was conducted by J. Roos and S. Koopmans [67, (May 15, 1940):486-497]. The effect on the central nervous system could be ascertained by testing the homo lateral flexion of the hind leg. The strength of the reaction was reduced as the period of current passage was lengthened. This would suggest that passage of the current leads to increased activity of the higher centers affecting the spinal centers involved, and would negate the assumption that electricity reduces the activity of the cells of the central nervous system.

The effect of narcosis on the results of electric stimulation were also observed. Passage of the current decreased the profundity of the chemical narcosis from ether, chloral, urethane, and luminal.

• • •

Fright Disease.—Fright disease is not a disease entity, but is a symptom of encephalitis of any kind. A case is discussed by J. D. Verlinde [67, (June 15, 1940):525-533] which began as fright disease, progressed by showing symptoms typical of encephalitis, and at death yielded the virus of idiopathic encephalitis and also the virus of Carré.

The variety of symptoms recognized is ascribed to the resistance or susceptibility of the host, which involves not only the presence of the virus but also the degree of intoxications resulting from destruction of tissue, the amount of liver damage and consequent insufficiency, hereditary susceptibility, and previous exposure to virus carriers. Climatic conditions and the time of year may be factors, also.

• • •

Ketosis in Cows.—The quantity of acetone and acetylacetic acid in the urine is not comparable to, nor variable with, the amount in the digestive tract, according to C. J. DeGier [67, (Aug. 15, 1940):703-720]. Administration of glucose was the only reliable treatment for acetonemia, and the results were directly related to the promptness with which intravenous administration of glucose occurred. Forcing feeds must be fed sparingly, if at all, during the period of treatment and recovery.

Fluorosis in Cows.—A herd of cows pastured near a plant which manufactured chemical fertilizer developed cachexia, lameness, and finally inability to walk. Symptoms were more pronounced at time of parturition. L. F. D. E. Lourens found [68, (March 1, 1941):229-236]



—Gov. Serum Institute, Rotterdam
Uneven wear of teeth, osteoporosis, and sequester of mandible in 6-year-old cow which died of fluorine poisoning.

abnormal wear and abrasion of the teeth the most noticeable change, but there were cartilaginous sequesters, softening, and adventitious development of the long bones, and areas of necrosis in the orbital cavity and the mandibular alveoli.

Fluorosis was suspected, and analysis of the bones revealed from 0.59 to 0.9 per cent of fluorine.

• • •

Leptospirosis in Dogs.—Serum agglutination tests in 280 unselected dogs revealed about 40 per cent showing a reaction in some degree, reports Madame A. Beuver-Asman [67, (Oct. 1, 1940):799-815]. In those animals showing a high titer, the proportion of *Leptospira icterohemorrhagiae* to *Leptospira canicola* was as 1 : 2, which agrees with the proportion found in animals showing symptoms of the disease. Cats showed no reaction, and it is improbable that many were infected.

The progress of titer in infected dogs is followed, the trend is charted, and it is concluded that repeated examinations are needed before an accurate prognosis can be formulated.

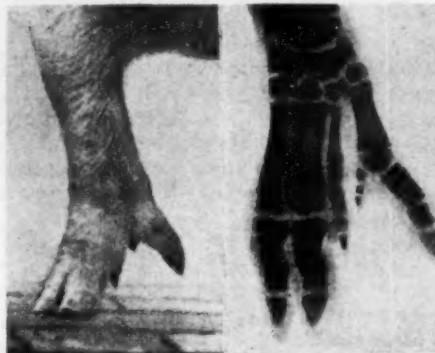
Trichomoniasis in Cattle.—The culture medium recommended by Schoop and Oehlkens

was more suitable for the growing of *Trichomonas fetus* than was a medium of higher albumen content, in experiments conducted by G. J. DeGier [67, (Nov. 1, 1940):902-908]. Allantoic fluid was a favorable medium, but scrapings from cotyledons were valueless when suspended in sodium chloride solution.

• • •

Tropins in Brucellosis.—The tropin reaction in brucellosis is based on a demonstration of the agents which stimulate phagocytosis, namely the tropins. J. Van der Hoeden [67, (Nov. 15, 1940):963-978] found them to be thermostable, while the opsonins were thermolabile. The test is performed by heating serum to 132 F. for inactivation, and mixing 0.1 cc. heated serum, 0.1 cc. washed citrated blood cells, and 0.2 cc. *Brucella abortus* suspension. The reaction is complete in thirty minutes in a water bath at 98.5 F. The test is regarded as highly specific and very sensitive. The correlation between tropin, agglutination, and complement fixation is discussed.

• • •



—Small Animal Clinic, Utrecht
Polydactyly in a pig showing the external appearance and the x-ray view of the foot [68, (Feb. 1, 1941): 145].

• • •

Air Space in Hatching Eggs.—The volume, composition, and pressure of gases in the air space of an egg were studied by J. Roos and C. Romyn [68, (Jan. 1, 1941):3-13]. Using methods which did not interfere with embryonation, they found that at least 85 per cent of the chicks had breathed before picking the shell, using the air in the airspace. Oxygen analyses as low as 9 per cent and carbon dioxide analyses as high as 9 per cent were found just prior to picking the shell. The physiological importance of the parafetal stage is discussed.

• • •

Forage Poisoning in Horses.—Forage poisoning or grass sickness is a common condition in horses in Holland. Because of the high humidity which prevails and the liberal application of fertilizer the pastures are lush. Horses

and cattle eat large amounts of forage in a short period of time, and in studying the resulting grass sickness L. Seekles found [68, (Feb. 1, 1941):109-131] that fermentation in the stomach is rapid, so that autointoxication develops frequently. It is also suggested that probably there is interference with the autonomic nervous system and with the endocrine glands. Work along these lines is being continued.

The Interference Phenomenon or Cell Block Effect

An interference phenomenon was first mentioned in connection with immunizing procedure in 1935. In that year, Hoskins reported interference between neurotropic and pannotropic yellow fever in monkeys, while Magrassi, working independently, found interference between nonencephalitic and encephalitis herpes viruses in rabbits. Since then, many instances of interference between strains of virus have been recorded.

Stader and Slaughenaupt, in studying the immunizing effect of distemper virus vaccine in dogs, observed that upon injecting the vaccine there was an immediate protection against distemper and referred it to a cell-block effect. Schlotthauer reported that dogs injected with 15 mg. of distemperoid virus did not contract distemper upon exposure immediately after inoculation, but that dogs receiving 7.5 and 2.5 mg. did contract the disease when exposed immediately.

Green has shown that serial passage of canine distemper virus through ferrets reduces its virulence for foxes and dogs so that it produces a mild immunizing distemperoid infection when injected into these animals. Now Green and Stulberg have shown that a distemper virus modified by ferret passage so as to become harmless vaccine for foxes and dogs exhibits the interference phenomenon or cell block effect with respect to a virulent distemper infection in foxes.

In one experiment, 40 foxes were infected with distemper by instilling 100 mg. of virulent virus intranasally into each. Of these 40 foxes, 10 were left as controls, 10 were simultaneously injected with 200 mg. of distemperoid virus, 10 were injected with 200 mg. of distemperoid virus three days after being infected, while the remaining ten were similarly injected with 200 mg. distemperoid virus twelve days after being infected. All 10 control foxes died, while all 30 foxes treated with distemperoid virus lived, thus demonstrating ability of the distemperoid virus to block the entrance of virulent virus into the cells, or to interfere with the disease process at any stage up to twelve days after infection with active fox distemper virus.—[R. G. Green and C. S. Stulberg, *Distemperoid Virus Interference in Canine Distemper*: *Science*, 103, (April 26, 1946): 497.]

BOOKS AND REPORTS

Lameness in Cattle

All types of ailments and disturbances which interfere with normal action and movement of the extremities are completely discussed. The author takes up in logical order the diseases of the forelegs, the hind legs, and the pelvis. Each section of the body is discussed from the following angles: luxations, abscess formation, muscular rupture, tendinitis and bursitis, contusions, hygromas, wounds, hematomas, rickets and osteomalacia, polyarthritis, vitamin deficiency, necrosis, and paralysis due to nervous derangements. — [*Gliedmassenkrankheiten des Rindes*. By Ernst Wyssmann, Zurich, Switzerland, emeritus professor of Obstetrics, University of Bern. Cloth. 209 pages, in German. Illustrated. 1942.]

Mating Behavior of the Male

This book deals with semen production in bulls, and the effect on regularity of reproduction, outlines detailed methods for examination of semen, and discusses fully the interpretation of results of these several examinations. Illustrated with drawings and with photomicrographs in color of normal and abnormal sperm. — [*The Behavior of the Male at Mating. Control of the Semen*. By T. Bonadonna, Collana Tecnico-Scientifica "Lazzaro Spallanzani." Paper. 173 pages, in Italian, with English summary.]

Annual Review of Biochemistry

In the preparation of this volume, 21 different phases of the field of biochemistry have been analyzed and brought down to date, each by one or two authors specializing in that particular field. Each chapter reviews the information which has been gained since the subject was previously treated for publication, interprets this information in the light of all known facts, and then lists (as a bibliography of related titles) the authors of the information cited and the journals in which the findings were first published.

The information presented is not readily usable by the practicing veterinarian, but it is basic for anyone engaged in an attempt to explain the functioning of the several organs of the body. Since the veterinary profession is engaged in serving agriculture it is interested not only in the biochemical processes of animals, but also of the plants which furnish the feed for animals.

The arrival of this volume serves again to emphasize the amount of effort being expended to learn the secrets of life, and the rapidity with which the imponderables of yesterday are being brought into focus and understanding. It provides an inspiration and an incentive to all

veterinarians who would render a greater service to man by showing how the livestock can be kept healthy and well-nourished and made to add increasingly to the well-being of man.— [*Annual Review of Biochemistry, Volume XV*. Edited by J. Murray Luck. Cloth. 687 pages. Annual Reviews, Inc., Stanford University P. O., Calif. 1946. Price \$5.00.]

Artificial Insemination

A compilation of information on this subject has been made, with summaries in English, from the time that Amantea reported use of the artificial vagina in the dog (1914), through the various adaptations to other species, to the general or popular use of the procedure in dairy cattle today.

The material is presented in the form of abstracts or summaries, by years, of the articles on the subject as they were published.— [*Works, Studies, Researches, and Remarks on Artificial Insemination of Domesticated Animals Published in Italy from 1914 to 1945*. Edited by T. Bonadonna and R. Bovati. Collana Tecnico-Scientifica "Lazzaro Spallanzani." Paper. 283 pages.]

Addendum to Milks' Fifth Edition

The decade, 1937-1947, stands apart in chemotherapy as a period of prodigious achievements. The newest books on the subject had to be revised several times to keep them from losing respectability. A sizeable number of sensational agents rushed in at an amazing rate and quickly rooted themselves among the new and essential remedies. Milks' "veterinary codex," which was given three comprehensive revisions in the last ten years, had to have a 21-page addendum to the fifth edition published in 1943 under the restrictions imposed by the war, because, come 1946, it was caught short of the "wonder drugs" which had come into general use. It lacked the spectacular antibiotic agents, some new sulfonamides, certain anthelmintics, famous insecticides, and others which are now making therapeutic history. In this addendum, one scents the determination to justify the confidence the former editions have won in the field of veterinary pharmacology. The convenience of having the authenticated facts about the newcomers bound between covers deserves the highest praise. In the hurricane of material chasing across the screen, it was no simple task to separate the chaff from the kernels of these new agents. In doing so, Milks has done another favor to the veterinary profession.— [*Veterinary Pharmacology, Materia Medica, and Therapeutics. Fifth Edition with an Addendum*. By Howard Jay Milks, Professor of Therapeutics, New York State Veterinary College, Cornell University. Cloth. 692 pages. Alex Eger, Inc., Chicago. 1946. Price \$8.00.]

THE NEWS

1947 Convention Will Be Held in Cincinnati Week of August 18

Because it appeared that adequate hotel accommodations in Toronto could not be guaranteed for the 1947 annual meeting, the Board of Governors was authorized at the Boston session to select, if necessary, another site for next year's convention. Following later advice from Toronto that not more than 10 per cent of hotel rooms could be allocated for convention purposes, a survey was made of other possibilities in zone 1, in which the 1947 meeting should be held according to the zoning schedule for AVMA sessions. The survey showed that Cincinnati offered the best facilities and prospects.

Accordingly, at its meeting in Chicago on Oct. 5, 1946, the Board selected Cincinnati and designated the week of August 18 for the meeting. The exact dates and duration of the 1947 session will be fixed by the Executive Board at its winter meeting in Chicago on Dec. 1, 1946.

HOUSING BUREAU TO HANDLE ALL RESERVATIONS

Convention headquarters will be at the Netherland Plaza. The Cincinnati Convention Bureau has obtained a guarantee of 1,200 rooms for AVMA delegates in several hotels, including the headquarters.

In order that allocation of hotel rooms can be handled in an orderly manner, a housing bureau will be set up in the near future by the committee on local arrangements and in coöperation with the convention bureau. No Cincinnati hotel will accept reservations for the AVMA convention except those that are cleared through the bureau. Announcement will be made as soon as the housing bureau is established and reservation blanks will be printed in the JOURNAL.

SESSION IN TORONTO LATER

It will be a disappointment to AVMA members on both sides of the border that prospects for adequate hotel space in Toronto were such that it was necessary to move the 1947 convention elsewhere, that city having been selected by the House of Representatives at its 1945 business session. However, it is anticipated that the invitation will be renewed by Canadian members as soon as the hotel situation there improves. Since Toronto is in con-

vention zone 1, in which sessions are held every other year, it will be eligible for consideration in 1949, 1951, and so on.

1948 CONVENTION IN SAN FRANCISCO

At the meeting of the House of Representatives in Boston last August, it was voted that the 1948 annual session be held in San Francisco, the invitation having been officially extended by Dr. H. S. Cameron on behalf of the California association. It will be recalled that the 1942 meeting was scheduled for San Francisco but had to be held in Chicago on account of the war.

Research Fund Drive Passes Half-way Mark—Two Fellowships Activated

On another page will be found a report as of Oct. 10, 1946, of the individual contributions to the Research Fund showing total contributions of \$54,470.53 toward the original goal of \$100,000 to be raised from the veterinary profession as announced last January. Three states (Colorado, Massachusetts, Rhode Island) and the District of Columbia have now exceeded their quotas by substantial margins; ten other states have passed their half-way marks.

Veterinarians in the Territory of Hawaii have distinguished themselves by sending in contributions from 100 per cent of the members of the Hawaii Territorial Veterinary Medical Association and other veterinarians in the Hawaiian Islands, other than government and army personnel, some of whom have requested that their donations be credited to their home states.

Since the last bimonthly report (the September JOURNAL, p. 230), nearly \$12,000 has been contributed by 666 veterinarians.

The Committee on Fellowships of the Research Council has approved two grants for fellowship work and the appointments have been made. Dr. Howard W. Dunne, who received his D.V.M. degree from Iowa State College in 1941, is carrying on investigations on enteritis in swine in the Department of Animal Pathology, Michigan State College. Dr. M. J. Swenson, a veterinary graduate of Kan-

sas State College in 1943, has been accepted for graduate work at Iowa State College where he is doing work directed toward the nutritional aspects of the complex of ketosis, milk fever, and grass tetany. Both of these fellowship projects got under way on Sept. 1, 1946. The Research Council has an announcement elsewhere in this issue relative to applications for fellowships for the college year 1947-48.

With respect to the several fields of investigation for which funds can be earmarked by contributors, the following preferences have so far been indicated:

Unrestricted (to be used at the discretion of the Research Council).....	\$34,283.21
For research on small animals.....	8,579.33
For research on large animals.....	9,096.28
For research in the basic sciences....	1,589.83
For research on poultry.....	713.54
For research on fur-bearing animals..	208.34
Total	\$54,470.53

More Army Veterinarians Needed

The Army's current procurement objective to commission 200 veterinarians from civil life in the Army of the United States was less than 50 per cent attained on Oct. 1, 1946. Applications for temporary commissions are still being actively solicited. This objective must be met during 1946 if the profession's record of efficient veterinary service is to be maintained.

Vacancies for permanent commissions in the Veterinary Corps of the Regular Army are filled only by integration into the Regular Army of those who served under a temporary commission prior to Dec. 31, 1946. Only officers who have had active service since Dec. 7, 1941, or who may be issued temporary commissions and are on active duty prior to Dec. 31, 1946, are eligible to apply for integration into the Regular Army.

Necessary forms for submitting an application for a temporary commission may be obtained by writing to the Chief, Veterinary Division, Office of The Surgeon General, The Pentagon, Washington 25, D. C.

Veterinary Research Fellowships

The Research Council of the American Veterinary Medical Association announces that a number of veterinary research fellowships are available for the academic year 1947-48.

Holders of fellowships must be veterinarians and must be citizens of the United States or Canada. Veterinary students who expect to graduate at the end of the current school year may apply for fellowships for the following year. The last date for filing applications for the year 1947-48 is March 1, 1947.

The Committee on Fellowships of the Research Council will meet early in April to consider applications and to award fellowships. Applicants will be notified of the action on their

applications not later than May 15, in most cases earlier.

The stipend of the fellowships will be determined by the needs of the different fellows and will usually range from \$100 to \$150 per month.

For information concerning the Fellowship Project of the Research Council, see the February, 1946, JOURNAL, p. 107.

It is planned to publish later a list of suggested research projects for the general information of applicants.

For application blanks and other information write:

Dr. H. H. Dukes, Secretary
A.V.M.A. Research Council
New York State Veterinary College
Cornell University
Ithaca, New York.

APPLICATIONS

The listing of applicants conforms to the requirements of the administrative by-laws—Article X, Section 2.

First Listing

BRISBANE, WILLIAM P.
Desbarats, Ont., Can.
D.V.M., Ontario Veterinary College, 1942.
Vouchers: C. Kealey and A. L. MacNabb.
CRUZ, PAULO FROES
Brazilian Embassy, Washington 8, D. C.
D.V.M., Superior School of Agriculture and
Veterinary Medicine, 1921.
Vouchers: S. Torres and S. O. Fladness.
D'ORSONVILLE, MARIO E.
Carrera 13 No. 54-17, Bogota, Colombia, S. A.
D.M.V., Facultad de Medicina Veterinaria,
Bogota, 1925.
Vouchers: R. Plata Guerrero and F. A. Per-
laza.

LOVELL, JAMES E.
1608 Ninth St., Monroe, Wis.
D.V.M., Iowa State College, 1946.
Vouchers: F. A. McCarty and H. J. O'Connell.

MEIER, RAY
P. O. Box 114, Smithville, Mo.
D.V.M., St. Joseph Veterinary College, 1918.
Vouchers: G. L. Dunlap and A. Lockhart.

ROOTS, WALTER L. JR.
Box 193, Taft, Texas.
D.V.M., Texas A. & M. College, 1946.
Vouchers: G. R. Burch and H. T. Barron.

SCHWARZENBACH, HOWARD F.
106 W. 8th St., Big Spring, Texas.
D.V.M., Texas A. & M. College, 1943.
Vouchers: O. E. Wolfe and H. Fisherman.

Second Listing

Alexander H., Alfonso, Bajio 360, Mexico, D. F.
Barstow, Ivan L., 303 Livestock Exchange Bldg.,
Denver 16, Colo.
Blakely, C. Lawrence, 180 Longwood Ave., Bos-
ton, Mass.

(Continued on page 384)

Fourth Report on Contributions to AVMA Research Fund
Geographical Breakdown as of October 10, 1946

State	Total Number Veterinarians	Quota*	Number of Con- tributions (to date)	Total Amount Con- tributed (to date)	Per Cent of Quota (to date)
	(1945 figures)				
Alabama	125	\$ 1,250	21	\$ 300.00	24.0
Arizona	42	420	11	145.00	34.5
Arkansas	59	590	12	116.17	19.1
California	1,044	10,440	320	6,063.00	58.0
Colorado	177	1,770	90	2,130.00	120.0
Connecticut	136	1,360	42	803.00	59.0
Delaware	32	320	4	40.00	12.5
District of Columbia.....	58	580	30	702.00	121.0
Florida	142	1,420	29	825.00	58.0
Georgia	147	1,470	38	600.00	40.8
Idaho	71	710	29	335.00	47.2
Illinois	1,224	12,240	175	3,814.30	31.1
Indiana	585	5,850	67	932.00	15.9
Iowa	865	8,650	154	2,467.31	28.5
Kansas	404	4,040	77	1,805.00	44.7
Kentucky	137	1,370	26	287.00	21.0
Louisiana	85	850	14	260.00	30.6
Maine	68	680	23	455.00	67.0
Maryland	165	1,650	44	810.00	49.0
Massachusetts	206	2,060	72	2,310.00	112.1
Michigan	550	5,500	110	2,060.00	37.4
Minnesota	403	4,030	94	1,299.50	32.2
Mississippi	99	990	10	165.00	16.6
Missouri	356	3,560	131	3,155.00	88.6
Montana	63	630	25	245.00	39.0
Nebraska	281	2,810	70	1,218.75	43.4
Nevada	27	270	5	90.00	33.3
New Hampshire	35	350	11	135.00	38.6
New Jersey	301	3,010	64	1,135.50	37.7
New Mexico	29	290	12	232.50	80.0
New York	980	9,800	209	4,945.00	50.4
North Carolina	135	1,350	28	405.00	30.0
North Dakota	73	730	12	265.00	36.3
Ohio	740	7,400	173	2,991.00	40.4
Oklahoma	110	1,100	52	705.00	64.1
Oregon	175	1,750	43	710.00	40.6
Pennsylvania	656	6,560	121	2,316.00	35.3
Rhode Island	25	250	16	715.00	286.0
South Carolina	80	800	12	235.00	27.0
South Dakota	118	1,180	20	231.00	19.6
Tennessee	93	930	25	297.50	32.0
Texas	421	4,210	86	1,162.75	27.6
Utah	45	450	24	260.00	57.7
Vermont	96	960	25	345.00	36.0
Virginia	130	1,300	49	775.00	59.6
Washington	226	2,260	59	941.00	41.2
West Virginia	65	650	8	95.00	14.6
Wisconsin	502	5,020	89	1,420.00	28.3
Wyoming	38	380	18	195.00	51.3
Hawaii	16	160	16	410.00	256.3
Canada .....	...	...	9	115.25	...
Totals	12,640	\$126,400	2,904	\$54,470.53	43.0*

*Based on an average contribution of \$10.00 per veterinarian. However, the total amount contributed to date is 54.4 per cent of the original goal of \$100,000.

(Applications—Continued from page 382)

- Bryson, Henry L., Division of Sanitation, Dept. of Public Health, Regina, Sask., Can.
 Clarkson, Leslie T., Abbotsford, B. C., Can.
 Collins, Harold C., Experimental Fur & Game Station, University of Manitoba, Ft. Garry, Man., Can.
 Davis, Gordon L., Ladner, B. C., Can.
 DeGroodt, Joseph A., Mendham, N. J.
 Doherty, William P., 135 Broad St., Bridgeton, N. J.
 Dunham, Robert D., Corner Woodford and Rt. 48, Decatur, Ill.
 Durant, Leslie, 1153 Hanover St., Manchester, N. H.
 Hannum, Henry B., 4635 E. 19th Ave., Denver 7, Colo.
 Hatzios, Basil C., 2221 Mass. Ave., N. W., Washington, D. C.
 Hayden, William J., 51 So. English St., Marshall, Mo.
 Hodges, Harry G., 1341 E. State St., Ithaca, N. Y.
 Hollister, Charles J., 8 Chenango St., Montrose, Pa.
 Johnson, Seth D., R. D. 4, Ithaca, N. Y.
 Kabb, Charles H., 38½ W. Green St., Westminster, Md.
 Madrigal Y., Jesus M., Alamo 100 dep. 6, Mexico, D. F.
 Masson, Roy N., 610 8th Ave., Brookings, S. Dak.
 Mowder, Wilbur H., 121-123 E. Lexington St., Independence, Mo.
 O'Connor, William J., 431 Rivet St., New Bedford, Mass.
 Packer, Ralph H., 180 N. London St., Mt. Sterling, Ohio.
 Sanchez O., Luis, P. O. Box 741, Aduana 216 Norte, Tampico, Mexico.
 Schlauderaff, Clarence H., Wayzata Blvd. & Sunset Dr., Minneapolis, Minn.
 Schloemer, George C., 280 Winthrop St., Taunton, Mass.
 Trefzer, Armin C., 418 W. 60th Terrace, Kansas City 2, Mo.
 Tysver, David W., Stone Lake, Wis.

1946 Graduate Applicants

First Listing

The following are graduates who have recently received their veterinary degrees and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of junior chapters. Applications from this year's senior classes not received in time for listing this month will appear in later issues. An Asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

Colorado A. & M. College

McCLURKIN, ELVIN J.
 1720 Franklin St., Denver, Colo.
 Vouchers: J. Farquharson and H. W. Johnson.

Michigan State College

GOMEZ D., HERBERT R.
 Calle Martin Travieso No. 11, Santurce, P. R.
 Vouchers: C. S. Bryan and J. W. Cunkelman.

Second Listing

Iowa State College

Bailey, James H., D.V.M., Atlantic, Iowa.
 Klaas, Onken G., D.V.M., Wilmont, Minn.

Texas A. & M. College

Caraway, Charles T., D.V.M., Rt. No. 2, Tolar, Texas.
 Fickes, Kenton R., D.V.M., 431 W. 26th St., Houston, Texas.
 Gonzalez, Fernando J., D.V.M., c/o Nicaraguan Legation, Guatemala City, Guatemala.
 Gutteridge, John H., D.V.M., 21 Farrington St., Arlington, Mass.

U. S. GOVERNMENT

Meat Inspection Comes Home.—After being separated from the BAI for almost four years, the Meat Inspection Division is back home. The financial return to veterinarians entering the service and the prospects for promotion have never been better, according to *The Federal Veterinarian* (September, 1946).

The veterinary positions are allocated in the various grades approximately as follows: The P-1 grade is used only for probational appointments with promotion to the P-2 grade within four to six months, if services are satisfactory. In grade P-2, there are 330 positions; P-3, 440 positions; P-4, 86 positions; P-5, 30 positions; P-6, 11 positions. Including the increases effective July 1, 1946, the salary ranges for these grades are:

P-1.—\$2644.80 to \$3397.20.
P-2.—\$3397.20 to \$4149.60.
P-3.—\$4149.60 to \$4902.00.
P-4.—\$4902.00 to \$5905.20.
P-5.—\$5905.20 to \$6862.80.
P-6.—\$7102.20 to \$8059.80.

Veterinarians who are interested in obtaining employment in the Meat Inspection Service should be referred to the nearest inspector in charge, the area personnel officer, or to the Division's Washington office.

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Army Air Corps Dairy Farm.—The A.A.C. is setting up a dairy farm at Fort Pepperrell, Newfoundland, a base obtained from Great Britain on a 99-year lease in exchange for destroy-

ers before the war. The American forces stationed at Fort Pepperrell, because of a shortage of cows and poor quality of milk, have to bring milk to the island at enormous cost. The dairy farm is both a money-saving and health-promoting project. Thirty cows bred by artificial insemination will be, or were recently, shipped to Newfoundland from Prince Edward Island.

—From Bull. U. S. Army Med. Dept., July, 1946.

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Respecification Committee.—A committee charged with specifying the qualifications for the position of veterinary livestock inspector for the grades from P-1 to P-6 met in Washington in June. The members, appointed by President J. R. Kitzhofer, were Drs. Fred S. Driver, W. C. Herrold, H. C. Fauks, E. R. Jackson, and A. K. Kuttler.

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More Horses from Germany.—The Remount Division of the Quartermaster Corps at Front Royal has received another 100 thoroughbreds from Germany to augment larger shipments previously imported. Although German bred, the horses are of French parentage, offspring of animals confiscated from breeding farms in France during the war. International complications arose over attempt to register these animals with the Jockey Club.

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Crossbreeding Brahmans with Dairy Cattle.—The arrival from Guam of 2 outstanding Red Sindhi bulls and 2 heifers marks the beginning of a longtime experiment to determine the feasibility of crossing these members of the most popular of the humped cattle of India with American dairy animals. It is hoped that such desirable qualities as resistance to heat, pests, and drought among the imported animals will be retained in the crosses along with the greater dairy production of the American breeds.

A release from the Agricultural Research Administration says that the imported animals will be kept for a short time at Beltsville and will then be sent to the field station at Jeanerette, La.

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Equine Encephalomyelitis Summary.—Dr. B. T. Simms reports that the incidence of this disease has remained at a comparatively low level in most parts of the country with a total of 1,381 cases reported up to October 1. Only in Idaho and Oregon have late seasonal flareups occurred, and no explanation has been found. On the basis of past experience, it is expected that the first killing frosts will terminate the trouble in most localities for the current season.

• • •

World Health Organization.—President Truman has appointed Dr. Thomas Parran, Sur-

geon General of the U. S. Public Health Service, to head the U. S. delegation to the World Health Organization which will hold its first meeting at Geneva, Switzerland, in November. Dr. Van Zile Hyde, also of the USPHS, was named alternate. The organization will meet every four months. The purpose is to set up a permanent world health structure.

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Veterinary Personnel Changes, Bureau of Animal Industry

TRANSFERS

- Guy E. Abrams, from Olympia, Wash., to Portland, Ore.
- Richard E. Baer, from San Juan, P. R., to Columbus, Ohio.
- Ben A. Brinkman, from Oklahoma City, Okla., to Jacksonville, Fla.
- James E. Griffin, from Pierre, S. Dak., to St. Paul, Minn.
- Howard W. Johnson, from Auburn, Ala., to Beltsville, Md.
- Cleo L. Lash, from St. Joseph, Mo., to Sioux City, Iowa.
- Edward E. Maas, from San Juan, P. R., to Reno, Nev.
- William G. Moyer, from Atlanta, Ga., to Jacksonville, Fla.
- Seaborn Hassel Still, from Reno, Nev., to San Juan, P. R.
- Frank B. Wilkinson, from Jefferson City, Mo., to Kansas City, Kan.
- John W. Woods, from Raleigh, N. Car., to Richmond, Va.

RETIRED

- Sumner C. Babson, Sacramento, Calif.
- Albert M. Blackwell, Portland, Ore.
- Earl C. Cannon, Topeka, Kan.
- Mervin P. Hunt, Lansing, Mich.
- Henry R. McNally, Kansas City, Kan.
- Chester R. Perkins, Buffalo, N. Y.
- Willard T. Robertson, Jefferson City, Mo.
- Leonard S. Rohrer, Omaha, Neb.

RESIGNED

- Theodore C. Belding, East Lansing, Mich.
- Jacob C. Blumenthal, St. Paul, Minn.
- Charles W. DeLand, Lansing, Mich.
- Howard E. Hill, Nashville, Tenn.
- Seymour L. Kalison, Nashville, Tenn.
- Abraham B. Kamine, Richmond, Va.
- John M. Klar, Charleston, W. Va.
- Clarence J. Klooster, Madison, Wis.
- Thomas P. Koudelka, Richmond, Va.
- Jerry T. Martin, Little Rock, Ark.
- Earl L. Mundell, Kansas City, Kan.
- Cavett O. Prickett, East Lansing, Mich.
- Guy H. Todd, Des Moines, Iowa.

Veterinary Personnel Changes, Meat Inspection Division

TRANSFERS

- W. R. McCall, from Honolulu, T. H., to Ft. Dodge, Iowa.
- Charles J. Prchal, from Omaha, Neb., to Phoenix, Ariz.
- Lloyd S. Robertson, from Phoenix, Ariz., to Oklahoma City, Okla.
- Raymond V. Schoentrup, from Ft. Dodge, Iowa, to Los Angeles, Calif.
- Harold D. Valentine, from Philadelphia, Pa., to Wilmington, Del.
- Grady G. Wallace, from Ft. Branch, Ind., to Buffalo, N. Y.

APPOINTED

- Irvin Gross, Cleveland, Ohio.
- Chase C. Hamilton, Kansas City, Kan.
- Harvey J. Lawrence, Sioux City, Iowa.
- Norman P. Linde, New York, N. Y.
- Irvin C. Peters, Louisville, Ky.
- Henry W. Schirmer, So. St. Joseph, Mo.
- Morris L. Tropp, Philadelphia, Pa.
- Herbert R. Williams, Winona, Minn.

RETURNED FROM MILITARY DUTY

- William H. Bassett, Omaha, Neb.
- Samuel E. Grove, Ft. Worth, Texas.
- Robert A. Moody, Los Angeles, Calif.
- Marvin D. Stitt, Oklahoma City, Okla.

RETIRIED

- Frederick D. Meier, Milwaukee, Wis.
- A. R. Smith, Lexington, Ky.

SEPARATED

- Thomas L. Curran, Kansas City, Kan.

REINSTATED

- Samuel L. Hoffer, New York, N. Y.
- Jacob Holtzman, Chicago, Ill.
- Harold Shanzer, Philadelphia, Pa.

RESIGNED

- William W. Bishop, Louisville, Ky.
- John A. Gallagher, Buffalo, N. Y.
- Joseph R. Hockenberry, Detroit, Mich.
- Chauncey F. La Bar, Buffalo, N. Y.
- Ray Meier, Kansas City, Kan.
- Oscar O. Mosby, Sioux Falls, S. Dak.
- Lawrence B. Adams, St. Louis, Mo.
- W. Alexander Ezell, Kansas City, Kan.
- Charles W. Gollehon, Omaha, Neb.
- A. Theodore Grayev, Newark, N. J.
- Kenneth L. Kutler, Chicago, Ill.
- Richard J. Unfer, San Francisco, Calif.

CANADIAN GOVERNMENT

Revised Restriction on Imported Dogs.—Cancelling the orders of Aug. 29, 1944, and of March 24, 1945, the Minister of Agriculture, on April 26, 1946, directed that all dogs for entry

into Canada from the United States shall be accompanied with a certificate, as follows:

A certificate signed or endorsed by a veterinary inspector of the United States Bureau of Animal Industry certifying that the dog has been inspected and found free from any symptoms of contagious disease; that the dog has not been exposed to the infection of rabies and that no case of rabies has occurred within a radius of fifty miles of the place in which the dog has been kept for a period of six months immediately prior to date of shipment, or

A certificate signed by a licensed veterinarian of the State of origin certifying that the dog has been inspected and found free from any symptoms of contagious disease; that so far as can be ascertained it has not been exposed to the infection of rabies and that it has been vaccinated against rabies within a period of six months of the date of shipment.

The order was issued under the authority of the Animal Contagious Disease Act, of 1927. Performing dogs entered for a temporary sojourn are exempt. The order of Nov. 1, 1944, pertaining to dogs from other countries stands unchanged.

**AMONG THE STATES
AND PROVINCES**

California

The School of Veterinary Medicine.—Dr. C. M. Haring announces that the curriculum leading to the D. V. M. degree will be based on two years of preveterinary college training. It is hoped that a freshman class may be accepted in 1948, but it is feared that the seriousness of the building problem will necessitate a postponement to 1949 or even 1950. The preveterinary requirements will include 60 semester credit hours, of which at least six should be English or public speaking, and the others as recommended for the course in Animal Husbandry.

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Los Angeles Meeting.—More than 60 veterinarians met at the newly completed Veterinary Medical Building of Dr. C. H. Ozanian in Bellflower on September 11 to hear Dr. Thais de Tienne discuss "Diseases of Cats" as well as to listen to a paper on "Nephritis in Dogs" by Dr. Myron Thom. Both speakers are from Pasadena. Refreshments were served by Drs. Ozanian and M. M. Johnson.

S/B. F. CORBIN.

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Grub Control Program.—Dr. Kenneth G. McKay, extension specialist in veterinary science, reports that a growing interest in cattle grub control exists among the 48 counties from

which reports are available. The project was begun on a demonstration basis in 1942-43; it enlisted about 10,000 cattle the next year; it grew to 123,639 head during 1944-45; and has now achieved a known total of 215,706 cattle. These animals are found on 768 ranches raising beef cattle and 2,260 farms raising dairy cattle. The work was done with 29 public spray machines and 261 privately owned ones.

Illinois

Join Veterinary Faculty.—Dean Robert Graham announces the addition of three members to his growing faculty for the College of Veterinary Medicine. Dr. Stephen B. Hitchner, with a B. S. degree from Rutgers and a V. M. D. from Pennsylvania (1943), has done some graduate work on diseases of poultry under Dr. F. R. Beaudette and has served as a Captain in the Veterinary Corps—having been assigned to the Pan-American Sanitary Bureau to make a survey of animal diseases along the Pan American highway in Mexico, Central America, and Colombia. He will become instructor in avian pathology.

Dr. Raymond E. Watts was awarded the D. V. M. degree at Colorado State College in 1942, engaged in general practice with Dr. J. T. Schwab, Oconomowoc, Wis., for a year, and then served in the Veterinary Corps from 1943 to 1946, with assignment to the Sixth Service Command. He will serve as instructor in the veterinary extension.

Dr. T. W. Millen holds a B. S. degree from Monmouth college and D. V. M. and M. S. degrees from Iowa State College. He has done work as a biochemist at the Iowa Veterinary Research Institute and at the Sioux City branch of Allied Laboratories. In 1940, he went to India and has served as a faculty member of three Indian Universities, becoming head of the Department of Agriculture and Dairying at Allahabad in 1943. He will serve as assistant in veterinary pathology and hygiene.

* * *

Twenty-seventh Annual Conference.—An added feature on the program of this Veterinary Short Course was the participation of the University of Illinois College of Medicine in Chicago. On October 10 and 11, meetings were held at Urbana as usual, but on the last day meetings were held at 1853 West Polk St., Chicago, where the College of Medicine is located.

A series of demonstrations and illustrated lectures was arranged by Dr. Jesse Sampson, chairman of the conference, and more than 200 practitioners availed themselves of the opportunity of learning the very newest information on the following wide variety of subjects from this imposing array of speakers and demonstrators.

Dr. H. J. Hardenbrook: "Drawing Blood From Swine."

Dr. G. J. Rubin: "Drenching Sheep by the Whitlock Method."

Dr. H. S. Bryan: "Collecting Milk for Laboratory Examination."

Drs. H. J. Hardenbrook and L. E. Boley: "Diagnosis of Pregnancy in Cows and Mares." (Including biological and chemical tests.)

Drs. L. E. Boley and R. E. Watts: "Collecting and Diluting Bull Semen for Artificial Insemination."

Drs. O. J. Alberts and H. E. Rhoades: "Agglutination Tests for Brucellosis, Swine Erysipelas, and Puerorum Disease."

Dr. G. R. Fowler, head of Veterinary Surgery, Iowa State College, Ames: "Choice of Anesthetic for Surgery in Large Animals," and "Rumenotomy and Other Surgical Operations in Cattle."

Dr. Vera M. Hanawalt: "Hemoglobin Determinations."

Dr. Jesse Sampson: "Analysis of Urine for Pathologic Constituents."

Dr. R. P. Link: "Equine Saliva Tests."

Dr. N. D. Levine: "Identification of Internal and External Parasites."

Dr. S. B. Hitchner: "Fowlpox Immunization; Laryngotracheitis Immunization," and "Newcastle Disease."

Dr. C. C. Morrill and others: "Autopsies," and "The AVMA Meeting in Boston."

Dr. O. D. Grace, Food and Drug Administration, Washington, D. C.: "Quack Remedies."

Dr. L. E. St. Clair: "Some Anatomical and Functional Aspects of the Bovine Mammary Gland."

Dr. P. D. Beamer: "Bovine Mastitis Control Program in Illinois."

Dr. H. J. Hardenbrook: "Penicillin Therapy in Bovine Mastitis."

Dr. J. G. Hardenbergh, executive secretary, AVMA: "Greetings from the AVMA."

Dean Robert Graham: "The College of Veterinary Medicine."

Prof. Fannie Brooks: "Undulant Fever in Illinois Home Economics Extension Program."

Dr. R. C. Newton, director of research, Swift & Co: "Progress Report of the National Research Council Committee on Veterinary Services for Farm Animals."

Dr. L. E. Boley: "Swine Brucellosis Project 1046."

Dr. C. E. Fidler, superintendent, Division of Livestock Industry: "New Regulatory Measures."

All of the preceding items were presented at Urbana. Persons not otherwise identified are members of the faculty of the College of Veterinary Medicine. The following speakers are members of the College of Medicine, University of Illinois, at Chicago, and the papers were presented on the third day of the conference:

Dr. W. H. Cole: "Surgical Operation," and "Modern Trends in Surgery."

Dr. G. E. Wakerlin: "Normotension and Hypertension in the Dog."

Dr. W. O. Thompson: "Recent Developments in Endocrinology."

Dr. E. R. Loew: "New Antihistamine or Anti-allergic Drugs as Possible Therapeutic Agents in Animals."

Dr. E. Meyer: "Antibiotics in Pathogenic Fungus Infections."

Dr. T. G. Hull: "Animal Diseases Transmissible to Man."

Dr. D. P. Slaughter: "Hormonal Relationships to Malignant Disease with Particular Reference to Treatment."

Dean A. C. Ivy: "Contributions of Animal Experimentation to Human and Veterinary Medicine."

There were also tours of the animal hospital and demonstrations in anatomy, pharmacology, physiology, pathology, and bacteriology.

* * *

Encephalomyelitis.—Nine cases of this disease, 2 of which were fatal, had been reported in the state before Sept. 10, 1946.

* * *

Northern Illinois Association.—An original and by no means trivial step in association work was the adoption of a by-law specifying that a nominating committee shall present at least two nominations and that a vote by ballot shall be taken for each of the offices declared in the constitution. The expressed motive was to avoid the habitual *viva voce* voting because it does not always represent the voice of the members.

Officers elected for the year ahead are: Dr. C. R. Collins, Dixon, *president*; Dr. P. T. Gambrel, Winnebago, *president-elect*; Dr. C. L. Smith, Sycamore, *secretary-treasurer*; Dr. H. P. Wessels, Geneva, *member of the executive board*.

* * *

National Society for Medical Research.—Research on animals for the development of life-saving medical knowledge has been endorsed by the Chamber of Commerce of the United States. A poll among members registered 2,424 votes in favor and only 18 opposed to the following statement: "In view of the great progress that has been made in preventive and curative medicine and surgery through animal research and the prospect of even greater progress in the future, the National Chamber is unalterably opposed to the prohibition of this scientific procedure. Such a prohibition would seriously hamper all medical progress."

* * *

Cooperative Slaughtering.—Farm Bureau members have completed plans to establish slaughter processing plants in eight counties, according to Frank Gouger of the Illinois Agricultural Association (*National Livestock Producer*, July-Aug., 1946). The plants will cost from \$60,000 to \$125,000 each, with surrounding lockers and facilities for the handling of poultry. The central plants are to kill, cure, smoke, and chill meat, and render lard for the local locker plants.

Indiana

Purdue Conference.—The Thirty-fourth Annual Short Course for veterinarians was held at Lafayette Oct. 2 to 4, 1946. Out-of-state speakers who took part in the program included the following:

Dr. Walter Wisnicky, Fond Du Lac, Wis.: "Trichomoniasis in Cattle," and "Brucellosis Control from Practitioner's Viewpoint."

Dr. H. C. H. Kernkamp, University of Minnesota, St. Paul: "Diseases of Hogs," and "Immunes."

Dr. C. F. Clark, state veterinarian, Lansing, Mich.: "Sterility in Cattle," and "Digestive Diseases in Cattle." *

Dr. C. S. Bryan, Michigan State College, East Lansing: "Mastitis."

Dr. L. D. Frederick, Swift and Co., Chicago: "Diseases of Sheep."

Dr. Harry W. Johnson, Colorado State College, Fort Collins: "Surgical Techniques." (Illustrated with movies.)

Dr. R. R. Birch, Cornell University, Ithaca, N. Y.: "Vaccination as an Aid to Brucellosis Control."

Dr. J. G. Hardenbergh, executive secretary, AVMA, Chicago: "Affairs of the American Veterinary Medical Association."

The following members of the Department of Veterinary Science at Purdue University took part:

Dr. H. E. Moses: "Newcastle Disease—A Threat to the Poultry Industry."

Dr. L. P. Doyle: "New Turkey Disease in Southern Indiana."

Other speakers included:

Dr. James Murdoch, Indianapolis: "USBAI Activities in Indiana."

Mr. Randolph Core, Franklin: "Brucellosis Control from a Dairyman's Viewpoint."

Dr. H. J. Reed, dean, School of Agriculture, Purdue University: "Greetings."

Dr. G. E. Botkin, state veterinarian, Indianapolis: "Discussion and Questions on Brucellosis."

Prof. Frank Hall, Department of History, Purdue University: "One World, Two Worlds, or None."

The entire program on Friday, October 4, was devoted to clinics. Workers in the large animal clinic were: Drs. W. Wisnicky, C. F. Clark, C. S. Bryan, H. W. Johnson, L. E. Andres, H. D. Carter, L. A. Clark, R. H. Cullop, F. A. Hall, E. S. Hess, J. J. Kortenber, H. A. Lidikay, P. F. Scott, C. Harvey Smith, and P. H. Wagaman.

A swine clinic was conducted by Drs. H. C. H. Kernkamp, M. M. Coble, R. W. Elrod, C. J. Hufty, E. W. Kline, A. R. Puterbaugh, M. M. Seeger, Ray F. Smith, and T. L. Steenerson.

Sheep and poultry clinics were held by Drs. L. D. Frederick, R. L. Bridge, J. R. Davis, D. W. Gerber, D. S. Kline, M. D. Neuhauser, F. C. Tucker, and O. K. Young.

More than 300 veterinarians registered for the meeting, despite the housing shortage and the difficulty of providing food.

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Regional Conference on Brucellosis.—Federal and state veterinarians from Illinois, Indiana, Ohio, Kentucky, and Michigan met at the Indiana University Medical Center, Indianapolis, on Sept. 26-27, 1946, to discuss veterinary and human aspects of the problem.

Lieutenant Governor R. T. James, commissioner of agriculture, delivered the address of welcome, and Dr. L. E. Burney, state commissioner of health, made the response. The following speakers appeared on the program:

Dr. B. T. Simms, chief, Bureau of Animal Industry, and president, American Veterinary Medical Association: "The Brucellosis Problem."

Dr. C. K. Mingle, BAI, Beltsville, Md.: "Bovine Brucellosis."

Dr. L. M. Hutchings, Purdue University, Lafayette: "Swine Brucellosis."

Dr. C. R. Donham, Purdue: "Fundamentals of Brucellosis Control."

Dr. Carl F. Jordan, director, Division of Preventable Diseases, and epidemiologist, Des Moines, Iowa: "Epidemiology of Brucellosis."

Dr. Neal Davis, Lowell, Ind.: "Diagnosis and Treatment."

Dr. T. B. Rice, Indiana University School of Medicine: "Chronic Brucellosis as a Public Health Problem," and "Brucellosis, a Human and Veterinary Problem."

Drs. Taylor, Schneider, Damon, and Fagan of the Indiana State Board of Health discussed the three papers immediately preceding, and Dr. Rice summarized the proceedings.

Dr. C. H. Hays, inspector in charge, BAI, Lansing, Mich.: "Area Brucellosis Control in Michigan."

Mr. R. M. Core, chairman, Indiana State Livestock Sanitary Board, Franklin: "Brucellosis Control from a Dairyman's Viewpoint."

Dr. F. A. Hall, Garret, Ind.: "Brucellosis Control from the Viewpoint of the Practicing Veterinarian."

Dr. O. C. Schockley, president, Indiana Veterinary Medical Association, New Ross: "Comments and Discussion."

The closing session was a round-table discussion of control efforts as applied in various states, presided over by Dr. C. E. Fidler. The panel was formed in the following manner:

summarized the discussion for more than 200 persons who attended the conference.

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Personal.—Dr. W. H. Stroup, Elkhart, has accepted a position as chief veterinarian for the Indiana State Board of Health. He has sold his hospital and practice to Dr. J. J. Fisher (MSC '46).

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Combined Clinic.—The Northeastern Indiana and the Wabash Valley associations held a joint meeting in the form of a clinic at Huntington on Sept. 11, 1946. The clinic was conducted by Drs. J. F. Bullard, Lafayette; H. D. Carter, Fairmount; C. Harvey Smith, Crown Point; T. L. Steenerson, Wilkinson; M. M. Coble, Columbia City; F. M. Williamson, Bluffton; H. W. Demsey, Huntington; C. E. Haeflich, Markle; and D. O. Turner, Franklin.

s/f. R. BOOTH, Resident Secretary.

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Meet at Spencer.—The Indiana-Illinois Veterinary Medical Association held its fall meeting and chicken dinner at Spencer on Sept. 20, 1946. The program consisted of the showing of the motion picture, "Vesicular Diseases of Livestock" from the Bureau of Animal Industry. Dr. L. A. Clark, Bedford, presided at the business meeting.

s/f. H. MARVIN BRATT, Secretary.

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Michiana Invites Physicians.—The Michiana Association invited the physicians of the area to attend a meeting in South Bend on September 12 to discuss the human and veterinary aspects of brucellosis.

s/f. R. BOOTH, Resident Secretary.

Iowa

Eastern Meets at Cedar Rapids.—The thirty-third annual meeting of the Eastern Iowa Veterinary Medical Association met Oct. 15 and 16, 1946. The address of the president by Dr. J. H. Krichel, Keokuk, was followed by these papers on widely separated subjects:

Dr. C. C. Franks, chief, Division of Animal Industry, Des Moines: "Regulations."

R. E. Shope, M. D., Rockefeller Institute, Princeton, N. J.: "Experimental Wartime Studies on Cattle Plague." Discussion was led by Dr. Carl E. Venske, Readlyn.

Dr. I. P. Irwin, Iowa City: "Laboratory Diagnosis by the Veterinary Practitioner."

L. H. Borts, M. D., director, State Hygienic Laboratory, Iowa City: "Rabies."

Dr. R. A. Packer, Iowa State College, Ames: "Control and Treatment of Bovine Mastitis." Discussion led by Dr. Frank M. Wilson, Mechanicsville.

Dr. Chas. E. Bassler, Ainsworth: "Supportive Measures for Treatment."

Dr. T. H. Ferguson, Lake Geneva, Wis.: "Cattle Practice." Discussion led by Dr. James C. Carey, West Liberty.

Question Box by Drs. T. W. Munce, Sioux

State	State Veterinarian	Inspector in Charge, BAI
Ill.	C. E. Fidler	A. K. Kuttler
Ind.	G. E. Botkin	J. W. Murdoch
Ky.	B. F. Pigg	E. E. Coshow
Mich.	C. F. Clark	C. H. Hays
Ohio	D. C. Hyde	A. J. DeFosset

Dr. Ward Giltner, dean of Veterinary Medicine, Michigan State College, East Lansing,

City; J. D. Ray, Omaha, Neb.; Frank Breed, Lincoln, Neb.; Ashe Lockhart, Kansas City, Mo.; H. C. Smith, Sioux City; H. E. Pinkerton, Fort Dodge; L. E. Willey, Sioux City; J. V. Lacroix, Evanston, Ill.; and D. M. Campbell, Chicago, Ill.

Dr. Frank C. Tucker, Claypool, Ind.: "Building a Successful Poultry Practice." Discussion led by Dr. N. M. Nelson, Waterloo, BAI inspector.

Dr. W. L. Andrews, Milton: "Sheep Practice." Discussion led by Dr. C. R. Fry, Centerville.

Dr. James Farquharson, Colorado State College, Fort Collins: "Veterinary Surgical Techniques." With motion pictures.

Dr. P. O. Dorweiler, West Bend: "Castration of Equine Cryptorchid." With motion pictures.

Dr. L. M. Hutchings, Purdue University, Lafayette, Ind., showed his motion picture, "Bleeding Swine from Anterior Vena Cava."

Dr. John G. Hardenbergh, executive secretary, AVMA, Chicago: "The American Veterinary Medical Association."

Dr. P. O. Dorweiler, president IVMA, West Bend, "The Iowa Veterinary Medical Association."

Prof. E. F. Ferrin, University of Minnesota, St. Paul: "Swine Husbandry and Management." Discussion led by Drs. C. H. Banks, Tipton, and G. D. Grogan, Peoria, Ill.

Dr. T. L. Steenerson, Wilkinson, Ind.: "Swine Practice." Discussion led by Dr. G. A. White, Riverside.

Question Box was conducted by the doctors already enumerated. Dr. Campbell was replaced by Dr. John S. Koen, Storm Lake, and Dr. Joe W. Giffey, Cedar Rapids, joined the group.

s/C. C. GRAHAM, Secretary.

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Southwestern Meets at Council Bluffs.—The fall meeting of the Southwestern Iowa Veterinary Medical Association was held on Oct. 1, 1946. The scientific program included the following numbers:

Dr. C. D. Lee, Iowa State College, Ames: "Poultry Diseases."

Dr. M. A. Emmerson, Iowa State College: "Trichomoniasis."

Dr. G. H. Leenerts, Humphrey, Neb.: "Dispensing from Veterinary Office."

Drs. J. A. Barger and C. C. Franks, Des Moines: "Remarks from Regulatory Officials."

Dr. R. M. Hofferd, Corn States Serum Co., Cedar Rapids: "Pulmonary and Streptococcal Conditions in Swine."

Mr. L. E. Harris, Norden Laboratory, Lincoln, Neb.: "Penicillin."

Dr. G. A. Hawthorne, Clarinda: "Question Box."

s/ M. R. BEEMER, Secretary.

* * *

Noteworthy Circular.—Always a hop or two

ahead in promulgating original ways of building up the morale of its members, the Eastern Iowa Veterinary Association distributes a four-page reprint of tributary editorials about the work of the veterinary profession from the principal newspapers within and surrounding its jurisdiction. One notes: "The Front Line Fighters," *Cedar Rapids Evening Gazette and Republican*; "On the Job," *Chicago Drovers Journal*; "Trustworthy Guardians," *Anonymous*; "The Veterinarians," *The Davenport Democrat*; "Veterinarians Work for Us," *Morrel Magazine*; "Help Fight Cholera," *Cedar Rapids Gazette*; "An Important Rôle," *Iowa Press Citizen*; "Veterinarians Performing a Public Service," *Davenport Democrat & Leader*; "Veterinarians Still on Guard," *Cedar Rapids Gazette*; "The Veterinarians," *Peoria (Ill.) Transcript*.

The factual essence of the material represents public relations in high gear and their complimentary character as a builder of morale would be hard to beat.—L. A. M.

* * *

Junior Chapter.—The first meeting of the fall quarter of the junior chapter of the American Veterinary Medical Association was held on Oct. 2, 1946. Dean H. D. Bergman addressed the meeting which is traditionally a joint meeting of all veterinary students and the veterinary staff.

A feature of the meeting was the presentation of the Borden Scholarship award to Mr. Victor Heber Austin, Ames, Iowa, for ranking the highest scholastically among his classmates at the completion of the junior year. He had a grade-point average of 3.57 out of a possible perfect of 4.0 for his three years in the veterinary college.

The program was completed by a social evening; doughnuts, cider, and apples were served while everyone tried to get acquainted with the rest of those present.

Kentucky

Association Presidents.—The Louisville *Courier-Journal* carried a two-column picture of three newly elected presidents of veterinary associations: Dr. T. J. Stearns, Louisville, Kentucky association; Dr. R. R. Salley, Orangeburg, S. Car., Southern association; and Dr. B. T. Simms, Washington, D. C., AVMA.

The Kentucky association also elected Dr. C. H. Holmes, Lexington, *first vice-president*; and Dr. C. A. Roll, Louisville, *secretary-treasurer*.

s/F. M. KEARNS, Secretary.

Louisiana

Personal.—Dr. (CVC '20) and Mrs. H. H. Baur, Monroe, drove almost 3,500 miles to attend the eighty-third annual convention at Boston, and to combine this with a vacation of two weeks.

Massachusetts

September Meeting.—The regular meeting of the Massachusetts Veterinary Association was held at Springfield on September 25.

Dr. F. M. Austin acted as moderator for a panel discussion of large animal papers presented at the AVMA convention in Boston, while Dr. A. R. Evans acted as moderator for a similar panel discussion of the papers on small animal problems.

s/H. W. JAKEMAN, Secretary.
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Pathologist at Angell Memorial Hospital.—Dr. D. L. Coffin (UP '38) has resigned his position as assistant professor of pathology at his alma mater to assume the duties of pathologist for Angell Memorial Hospital, Boston. He is the author of "Manual of Veterinary Pathology," (Comstock) which was published in 1945.

Michigan

Meeting at Charlotte.—The Western Michigan Veterinary Medical Association met on Sept. 19, 1946, at the hospital of Dr. A. E. Erickson, Charlotte. The program consisted of a demonstration by Dr. Paul Miller of the Erickson bleeding needle, of a dinner at the country club, and then an evening of discussion of a variety of veterinary problems. Some 60 veterinarians and their wives were present, and many entered freely into the discussion.

s/FRANK THORP, JR.

Minnesota

Southern Meets at Austin.—The Southern Minnesota Veterinary Medical Society met at the Hormel Foundation and Institute on October 3. The program included inspection of the swine improvement project, dinner at the country club, and an illustrated talk on "Bovine Infertility" by Dr. W. L. Boyd, University of Minnesota, St. Paul.

s/ KARL KNOCHE, Secretary.

Missouri

Kansas City Association.—Anthrax was the subject chosen for discussion at the August meeting held at the Continental Hotel. Dr. Hugh C. Fitch, of Missouri Valley, Iowa, a practitioner of wide experience in the handling of that disease, was the guest speaker. Field control and immunology was presented by Dr. E. F. Sanders and laboratory diagnosis by Dr. S. J. Schilling, both of Kansas City. The recent outbreak of anthrax in the central part of the state has aroused interest in these details.

s/GAIL S. SMITH, Secretary.
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Officers Elected.—The following officers were regularly elected at the summer meeting of the Missouri Veterinary Medical Association:

Dr. E. L. Seavers, Pleasant Hill, *president*; Dr. E. G. Bailey, Dexter, *vice-president*; Dr. J. L. Wells, Kansas City, *secretary-treasurer*; Dr. H. E. Curry, Jefferson City, *delegate to House of Representatives of the AVMA*.

Under the new constitution, the following executive board members were elected to represent the several districts of the state:

Northeast (1 yr.) Dr. W. H. Bailey, St. Joseph; alternate Dr. K. Sears, Maryville.

Central (1 yr.) Dr. B. M. Miller, California; alternate Dr. L. H. Beebe, Warrensburg.

Southwest (2 yr.) Dr. G. F. Jungerman, Aurora; alternate Dr. C. C. Moore, Springfield.

Kansas City (2 yr.) Dr. F. H. Suits, Odessa; alternate Dr. H. L. Bussong, Belton.

St. Louis (3 yr.) Dr. L. F. Bodenweiser, Kirkwood; alternate Dr. G. R. Killian, Webster Grove.

Northeast (3 yr.) Dr. W. H. Rodabaugh, Kirksville; alternate Dr. C. V. Conger, Kahoka.

Southeast (3 yr.) Dr. J. M. Cullison, Charleton; alternate Dr. C. T. Old, Sikeston.

s/ J. L. WELLS, Secretary.
• • •

St. Louis Meeting.—The regular meeting of the St. Louis District Veterinary Medical Association was held on October 4 to hear the discussion and see the demonstration by Dr. C. W. Darby, of Purina Mills, on "Laboratory Diagnosis of Bovine Mastitis and a Summary of Recent Therapeutic Studies."

A business meeting was held to establish a definite policy on each of six important projects: meeting place for future meetings, type of program needed, women's auxiliary, increased membership and interest, finances, and public relations activities.

s/ C. W. DARBY, Secretary.
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Kansas City Association.—A round-table discussion of udder troubles in dairy cows was featured at the meeting of Sept. 17, 1946, at Hotel Continental. Dr. S. L. Stewart, Olathe, Kan., acted as chairman and the members of his panel were: Drs. Ashe Lockhart, A. H. Quin, and J. S. Shillings of Kansas City; Kent Dudley, Iola, Kan.; E. L. Dicke, Louisburg, Kan.; and W. W. Wempe, Lawrence, Kan.

s/GAIL B. SMITH, Secretary.
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Kansas City Association.—Dr. Harold E. Moses, Purdue University, associate of Dr. C. A. Brandly and Dr. Erwin Jungherr in the studies of pneumoencephalitis of fowl (Newcastle disease), sponsored by the War Department, was the guest speaker at the October meeting held at Hotel Continental. Poultrymen and hatcherymen were invited to participate.

GAIL B. SMITH, Secretary.

New Jersey

Personal.—Dr. G. W. Rawson (USCVS '16) is now associated with Ciba Pharmaceutical Products, Inc., Lafayette Park, Summit, N. J., where he is in charge of veterinary clinical research. Dr. Rawson was formerly with Parke, Davis & Co., Detroit, and for twenty-three years served that company as assistant manager and veterinary consultant of their animal indus-

try department, and later was in charge of parasitologic research. He took his new position with the Ciba company on May 1, 1946.

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Brucellosis Control Division Organized.—Dr. H. J. Jenne (UP '40) has been selected to head the newly organized division for the control of brucellosis (Bang's disease) as a unit of the Bureau of Animal Industry of the State



Dr. H. J. Jenne

Department of Agriculture. As head of the division, Dr. Jenne will act as administrator for the programs to aid New Jersey herd owners in combatting the disease. Under his supervision, veterinarians will vaccinate calves at state expense for owners desiring the service.

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Field Day.—Abbott Dairies sponsored a field day for milk producers at Locust Grove Farm, Westville, on Sept. 12, 1946. The purpose of the meeting was to present demonstrations which would help dairymen produce milk more economically.

S/S. F. SCHEIDY.

• • •

Reportable Diseases.—The following list of diseases has been designated as reportable: actinobacillosis in breeding cattle, actinomycosis in breeding cattle, anaplasmosis in breeding cattle, anthrax, bacillary hemoglobinuria, backleg, coccidiosis in dairy animals, dourine, ecthyma in sheep, encephalomyelitis in horses and poultry, equine infectious anemia, erysipelas in swine, foot-and-mouth disease, glanders, hog cholera, hemorrhagic enteritis, influenza in horses and swine, infectious keratitis in cattle, Johne's disease in cattle, malignant edema, Newcastle disease, rabies, scabies in all animals, trichinosis, tuberculosis in all animals, vesicular exanthema in swine, vesicular stomatitis.

S/R. A. HENDERSHOTT.

New York

Mastitis Control.—The statewide program for control of mastitis (September JOURNAL, p. 238) is taking definite form. Facilities at the New York State Veterinary College are

being enlarged, and a local advisory committee will be appointed for each of the field laboratories at Aurora, Kingston, Canton, and Farmingdale.

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Personal.—Dr. Leo R. Karmin (CORN '43) has recently opened the Bellevue Animal Hospital at 242-01 Jamaica Ave., Bellevue, L. I.

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October Meeting.—The regular meeting of the Veterinary Medical Association of New York City was held on Oct. 2, 1946, at Hotel Pennsylvania. Mr. S. G. Hibben of the Westinghouse Corporation spoke on "Radiant Energy Applied to Field of Health" and showed motion pictures to illustrate his talk.

North Dakota

State Association.—The election of Dr. George W. Worner to the office of president is not only complimentary to both the federal and state forces but carries the sign that genuine unity among the different branches of the service is in sight, and also the realization that veterinarians are veterinarians and nothing else but. While Dr. Worner is not the first BAI president of an AVMA constituent association, administrative collaboration of state and federal forces in association work has not been famously common, advantageous as that sort of teamwork would have been through the years. It was gosh awful stupid for the elements of our small family to forsake one another on the pretense of allegiance to a different branch. As there is no conflict of interests in veterinary medicine, Worner's election contains a penetrating suggestion. Van Es and Schalk and Crew left something behind in N. D. Its name is Originality.—L. A. M.

Oklahoma

Livestock Clinic.—The second Oklahoma Live Stock Conservation and Production Clinic was held at Oklahoma City, Oct. 8 and 9, 1946. The program included many speakers on a variety of subjects, of which the following were of particular interest to veterinarians:

Dr. Benjamin Schwartz, U. S. Bureau of Animal Industry, Beltsville, Md.: "Round Worms Can Be Controlled."

Dr. Frank Breed, Norden Laboratories, Lincoln, Neb.: "Can Hog Producers Control Necro? Cholera? Erysipelas?"

Dr. I. B. Boughton, Texas Experiment Station, Sonora: "Internal and External Parasite Control in Sheep."

Dr. W. W. Rosenberry, state veterinarian: "Brucellosis Control in Oklahoma."

Dr. H. E. Kingman, Jr., Wilson and Co., Chicago: "Sterility and the Calf Crop."

Dr. B. T. Simms, chief, Bureau of Animal Industry, Washington, D. C., and president, AVMA: "Livestock Losses Due to Diseases and Parasites."

There were demonstrations of baby pig saving equipment, administration of phenothiazine for controlling sheep parasites, and grub eradication.

s/H. E. KINGMAN.

Ontario

Personal.—Dr. J. A. Henderson (ONT '36) has been appointed professor of clinical medicine at the Ontario Veterinary College. Dr. Henderson resigned his position as assistant professor of veterinary extension, University of Illinois, to join the faculty of his alma mater.

Pennsylvania

Meet at Meadville.—The Northwestern Pennsylvania Veterinary Club met September 22 to hear Dr. G. J. Nixon, Mt. Gilead, Ohio, discuss "Swine Diseases," and to see E. J. Deissler, M. D., demonstrate "Intestinal Surgery."

s/P. L. ROUSE, Secretary.

Virginia

Mayo Scholarship.—Dr. and Mrs. Nelson S. Mayo, Highland Park, Ill., and Mt. Dora, Fla., have established an endowment of \$10,000, the income from which will be used to provide financial assistance to worthy students at Hollins College, Salem. The endowment is established in memory of their daughter, the late Miss Dorothy C. Mayo, who was a graduate of this college.

s/E. E. THOMPSON.

Wisconsin

Northeastern Association.—The ninth annual meeting of the Northeastern Wisconsin Veterinary Medical Association was held at Sturgeon Bay on Oct. 15, 1946. Program speakers were Dr. Walter Wisnicky, Fond du Lac; Dr. C. E. Hammerberg, New London; and Dr. J. S. Healy, U. S. Bureau of Animal Industry, inspector in charge.

s/WILLIAM MADSON, Secretary.

* * *

Southeastern Association.—Meeting at Columbus on Oct. 17, 1946, the members of the Southeastern Wisconsin Veterinary Medical Association heard Dr. R. C. Klussendorf of the AVMA office, who formerly practiced at Columbus, discuss some of the problems of the American Veterinary Medical Association and show slides illustrating the central office, the people working in it, and the variety of services rendered by the association to its members.

This was followed by an open discussion of practice problems in which the attending members participated freely.

s/J. O. MCCOY, Secretary.

* * *

University Veterinary Staff Grows.—Dr. G. R. Spencer (KSC '40) has accepted a position with the Veterinary Science Department. Since graduation, Dr. Spencer has been engaged in research work at the University of Wisconsin, then served as an ensign in the Navy, and

since his discharge has been engaged in private practice at Cambridge, Wis.

His practice has been taken over by Dr. G. J. Jansen (MSC '45).

FOREIGN

Australia

Veterinarian Promoted.—Dr. Ian Clunies Ross has been appointed executive officer on the staff of the Council for Scientific and Industrial Research (*California Wool Grower*, Aug. 20, 1946), and a member of the executive committee of the council. Since obtaining the degree of B. V. Sc. at Sydney University in 1921, Dr. Ross has been interested in the parasites and diseases of sheep, having engaged in research work at Sydney and at the Tokyo Imperial University, and carried out a six-month sheep and wool survey in Mongolia, North China, Korea, and Japan before the outbreak of the war. During the war, he was director of scientific personnel in manpower and pastoral advisor to the war organization of industry.

His many outstanding contributions to the advancement of the wool and sheep industry have led to widespread recognition by fellow scientists and all sections of the industry. Evidence of this is seen in the elevation of Dr. Ross to this position, which is one of the most important in the Australian field of research.

England

Pay of Veterinary Officers.—The *Veterinary Record* (Aug. 14) points out that the new scale of pay for officers of the R.A.V.C. compared with that of physicians and dentists is "an invidious distinction against the veterinary surgeons of the Army," in view of the relative scope of his training—as long as the medical officer and longer than the dentist. After eleven years of service, the veterinary officer receives less than the physician and dentist whose pay is £1,606 and £1,022, respectively. There is also discrimination in promotions. The medical and dental officers are promoted to captain in one year and to major in eight years, whereas, the veterinarian reaches these ranks after two and ten years' service. In view of the versatile service rendered during the war, the discrimination is declared unjustified. The profession is urged to "present a firm and united front to combat the unworthy movement," and wisely adds that there is always victory where there is unity.

New Zealand

Healthy Dairy Herds.—A campaign is being waged to rid the dairy herds of New Zealand of tuberculosis. It is estimated that from 6 to 9 per cent of the cattle are infected. Repeated references to the program are made in clippings sent to the *JOURNAL* by Dr. Daniel J. Smith

(ONT '42) and taken from *The New Zealand Herald*. It is hoped that work can begin on an area basis and that all of the cattle may be tested in about three years.

COMING MEETINGS

University of Missouri. Short Course for Veterinarians. University of Missouri, Columbia, Nov. 4-6, 1946. A. J. Durant, Dept. of Veterinary Science, University of Missouri, chairman.

Cornell Annual Nutrition Conference. Onondaga Hotel, Syracuse, N. Y., Nov. 7-8, 1946; New York State College of Agriculture, Ithaca, N. Y., Nov. 9, 1946. E. I. Robertson, New York State Agricultural College, Ithaca, general chairman.

Mississippi Valley Veterinary Association, Inc. Hotel Custer, Galesburg, Ill., Nov. 7-8, 1946. H. R. Hornbaker, 759 E. Main St., Galesburg, Ill., secretary.

The American Public Health Association. Cleveland, Ohio, Nov. 12-14, 1946. H. J. Knapp, M.D., Commissioner of Health, Cleveland, Ohio, chairman.

Interstate Veterinary Medical Association. Martin Hotel, Sioux City, Iowa, Nov. 21-22, 1946. H. C. Smith, Allied Laboratories, Inc., Sioux City, Iowa.

Midwest Small Animal Association. Hotel Burlington, Burlington, Iowa, Nov. 14, 1946. Wayne H. Riser, Box 550, Evanston, Ill., secretary-treasurer.

American Society of Animal Production. Hotel Sherman, Chicago, Ill., Nov. 29-30, 1946. W. G. Kammlade, 110 Stock Pavilion, Urbana, Ill., secretary.

American Veterinary Deans. Palmer House, Chicago, Ill., Dec. 2, 1946. R. R. Dykstra, School of Veterinary Medicine, Kansas State College, Manhattan, Kan., president.

United States Live Stock Sanitary Association. Stevens Hotel, Chicago, Ill., Dec. 4-6, 1946. R. A. Hendershott, 33 Oak Lane Ave., Trenton 8, N. J., secretary-treasurer.

Nebraska State Veterinary Medical Association. Cornhusker Hotel, Lincoln, Neb., Dec. 11-12, 1946. L. V. Skidmore, College of Agriculture, Lincoln, Neb., secretary-treasurer.

South Dakota Veterinary Medical Association. Dec. 11-12, 1946. J. T. McGilvray, Rt. 3, Sioux Falls, S. Dak., secretary.

California State Veterinary Medical Association. California Polytechnic School, San Luis Obispo, Calif., Jan. 6-8, 1947. F. H. White, Grand Ave. at 3rd St., San Rafael, Calif., secretary.

Minnesota State Veterinary Medical Society. Jan. 6-8, 1947. H. C. H. Kernkamp, University Farm, St. Paul 8, Minn., secretary-treasurer.

Kansas Veterinary Medical Association. Wichita, Kan., Jan. 13-14, 1947. C. W. Bower, 3119 Stafford St., Topeka, Kan., secretary-treasurer.

Oklahoma Veterinary Medical Association. Skirvin Hotel, Oklahoma City, Okla., Jan. 13-14, 1947. C. H. Faucks, 505 Leonhardt Bldg., Oklahoma City 2, Okla., secretary-treasurer.

Tennessee Veterinary Medical Association. Noel Hotel, Nashville, Tenn., Jan. 13-14, 1947. A. C. Topmiller, 2620 8th Ave., S., Nashville, Tenn., secretary.

Intermountain Veterinary Medical Association. Jan. 13-15, 1947, Salt Lake City, Utah. M. L. Miner, Dept. of Veterinary Science, Utah State Agricultural College, Logan, secretary-treasurer.

Indiana State Veterinary Medical Association. Hotel Severin, Indianapolis, Ind., Jan. 16-18, 1947. H. A. Lidikay, Darlington, Ind., secretary-treasurer.

Mississippi Veterinary Medical Association. Jan. 17-18, 1947. Glen D. Gates, Clarksdale, Miss., secretary.

Texas State Veterinary Medical Association. Rice Hotel, Houston, Texas, Jan. 20-21, 1947. E. A. Grist, Box 921, College Station, Texas, secretary.

Iowa Veterinary Medical Association. Hotel Fort Des Moines, Des Moines, Iowa, Jan. 21-23, 1947. C. C. Franks, 602 Capital City Bank Bldg., Des Moines 9, Iowa, secretary-treasurer.

Michigan Veterinary Medical Association. Jan. 22-23, 1947. B. J. Kilham, Michigan State College, East Lansing, Mich., secretary.

North Carolina State College. Conference for Veterinarians. North Carolina State College, Raleigh, Jan. 28-31, 1947. C. D. Grinnells, State College Station, Raleigh, N. Car., program chairman.

Louisiana State University. Annual Short Course for Veterinarians. Louisiana State University, University Station, Baton Rouge, Jan. 29-30, 1947. W. T. Oglesby, Dept. of Veterinary Science, Louisiana State University, head.

Illinois State Veterinary Medical Association. Leland Hotel, Springfield, Ill. Jan. 29-31, 1947. W. D. Daugherty, 105 7th Ave., Sterling, Ill., secretary.

Institute of American Poultry Industries. Fact Finding Conference. Municipal Auditorium, Kansas City, Mo., Feb. 2-4, 1947. Cliff D. Carpenter, Institute of American Poultry Industries, 110 N. Franklin St., Chicago 6, Ill., president.

Chicago Veterinary Medical Association. Palmer House, Chicago, Ill., the second Tuesday of each month. Robert C. Glover, 1021 Davis St., Evanston, Ill., secretary.

Massachusetts Veterinary Association. University Club, Boston, Mass., the fourth Wednesday of each month. H. W. Jakeman, 176 Federal St., Boston 10, Mass., secretary-treasurer.

New York City Association. Hotel Pennsylvania, New York, N. Y., the first Wednesday of each month. C. R. Schroeder, Lederle Laboratories, Inc., Pearl River, N. Y., secretary.

Saint Louis District Meetings, Roosevelt Hotel, St. Louis, Mo., the first Friday of each month. C. W. Darby, Dept. of Animal Pathology, Ralston-Purina Co., St. Louis 2, Mo., secretary.

Houston Veterinary Medical Association. Houston, Texas, the first Thursday of each month. Edward Lepon, Houston, Texas, secretary-treasurer.

MARRIAGES

Dr. Donald Warlick Lackey (UP '46), Lenoir, N. Car., to Miss Doris Shelton Mitchell, Great Neck, L. I., N. Y., Aug. 31, 1946.

Dr. Norbert A. Dahlke (ISC '46), 712 S. Main St., Waupaca, Wis., to Miss Louise Mary Stuckert, Sept. 7, 1946.

DEATHS

★**Col. J. J. Aitken, R.A.V.C.** (retired), honorary member of the AVMA, died at Bombay, India, April 15, 1946. He was elected an honorary member in 1918 while serving as a lieutenant colonel at the Office of the Surgeon General of the Army in connection with the framing of regulations for forming the Veterinary Corps, U. S. Army, of World War I. He also served for a brief tenure in the office of Chief Veterinarian Lt. Col. D. S. White, A.E.F., at the headquarters of the Service of Supply at Tours in an undesignated capacity. Lieut. Colonel Aitkens, a division veterinarian of the R.A.V.C., was assigned for duty at the Office of the Surgeon General in 1917 by the British Army at the request of the Secretary of War.

E. W. Bolton, (OSU '19), 60, Washington Court House, Ohio, died Aug. 28, 1946, following a cerebral hemorrhage. An energetic practitioner, Dr. Bolton had practiced at Washington Court House and the surrounding counties for twenty-six years.

John Boylan (UP '12), 59, Drexel Hill, Pa., died Sept. 20, 1946, in Philadelphia General Hospital. Dr. Boylan formerly served as a veterinarian with the Women's SPCA.

★**D. D. Bradbury** (TH '15), 57, Fairbanks, Ind., died April 24, 1946. He was born at York,

Ill., Sept. 15, 1888. Dr. Bradbury was admitted to the AVMA in 1920.

★**M. J. Curran** (MCK '10), 62, New Bedford, Mass., died July 7, 1946, after an illness of three weeks. Born in Fall River, Mass., he had lived in New Bedford thirty-four years. Dr. Curran had been a member of the AVMA since 1913.

★**C. R. Dilts** (OSU '04), 64, Chipley, Fla., died June 29, 1946. Dr. Dilts went to the Philippines upon graduation from the Ohio State University and, after work on the eradication of rinderpest and other infectious diseases, returned to practice in Mansfield, Ill., and Thornville, Ohio. For twelve years before his death, he had been with the BAI in tuberculosis and brucellosis eradication work. He was admitted to the AVMA in 1928.

★**E. A. Downs** (KCVC '15), 55, Mount Sterling, Ohio, died Aug. 21, 1946, at Boston, Mass., where he was attending the AVMA convention. Dr. Downs had been a member of the AVMA since 1916.

E. L. Grubb (KSC '18), Boise, Idaho, died July 19, 1946, following an operation for gastric ulcers.

W. A. Haines, Sr. (UP '07), 66, Newtown, Pa., died recently of coronary thrombosis. Dr. Haines was born in Moorestown, N. J., and lived for several years in Bristol, Pa., before coming to Newtown. He served eight terms as representative in the Legislature, and was a member of the faculty of the National Farm School, Doylestown, Pa.

★**Charles Linch** (CORN '05), 69, Delmar, N. Y., died Nov. 11, 1944. Dr. Linch was admitted to the AVMA in 1908.

★**H. E. Pickeral** (USCVS '18), 52, Manassas, Va., died June 1, 1946. He had been a resident of Manassas for over twenty years. Dr. Pickeral was admitted to the AVMA in 1918.

★**H. A. Presler** (CVC '93), 76, University City, Mo., died July 8, 1946, of a heart attack. After many years of practice at Fairbury, Ill., and Hannibal, Mo., he spent fourteen years in meat inspection for St. Louis and St. Louis County. Dr. Presler had been a member of the AVMA since 1902.

★**M. A. Ruck** (OSU '16), 52, Long Island City, N. Y., died recently. He was born at Cleveland, Ohio, Nov. 29, 1893. Dr. Ruck had been with the Bureau of Animal Industry. He was admitted to the AVMA in 1918.

Dan Weaver (KCVC '16), 57, Coon Rapids, Iowa, died Aug. 2, 1946, of a cerebral hemorrhage. Dr. Weaver was born at Milford, Iowa. He began veterinary practice at Wauneta, Neb., before service in World War I in an infantry regiment. On his return from service, he began practice in Coon Rapids which he continued until his death. Dr. Weaver was a member of the Iowa Veterinary Medical Association.

★Indicates member of the AVMA.

THE VETERINARY PROFESSION AND THE WAR

General Kelser Wins Gorgas Medal

Brigadier General Raymond A. Kelser was awarded the Gorgas Medal, sponsored by Wyeth, Inc., and presented annually by the Association of Military Surgeons of the United States for outstanding work in preventive medicine for our armed forces. He is being given the medal, which carries with it an honorarium of \$500, for his work in eradicating rinderpest, a disease of cattle, in the Philippine Islands, making it possible for the Filipinos to have their own domestic milk supply.

General Kelser retired from active service to become dean of the College of Veterinary Medicine at the University of Pennsylvania. The medal was presented at a dinner in his honor on October 9, during the annual convention of the Association of Military Surgeons of the United States in Detroit, Mich.

Awards and Citations

Lieutenant Colonel Richard A. Huebner, V.C., was awarded the Legion of Merit because he "demonstrated forbearance, understanding, and coördinative ability in applying himself to the problems that confront an occupying army insofar as they bear on the public health and general welfare. He has contributed directly to the accomplishments of the Medical Department by guaranteeing the continued flow of biological products so essential in the control of human and animal disease."

* * *

Major Thomas C. Jones, V.C., received the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services," during the period from December, 1941, to March, 1946.

Meat and Dairy Hygiene School

The Meat and Dairy Hygiene School, conducted by Chicago Quartermaster Depot, graduated its one thousandth veterinary officer on June 12, 1946. The course, which throughout the war covered a period of six weeks, has now been increased to eight weeks, and will be continued as part of the Army's peacetime program.

The course of instruction is undergoing constant change to keep it abreast of developments in the food industry and to better qualify veterinary officers for the exacting duties and

requirements of food inspection and analysis work. Outstanding scientists and specialists appear before each class.

Col. Frank M. Lee, depot veterinarian, directs the school, and the staff includes Maj. Donald C. Kelly, Capt. M. C. Lockwood, and Capt. R. L. Stowe.

Veterinary Officers Separated from Military Service

Alabama
Fancher, James M.

California
Crowl, W. B. Jr.
Eville, Thomas B.
Hensley, John H.
Irvin, C. E. Jr.
Koebel, Floyd W.
Lapham, Robert F.
Morris, John T.
Stansbury, Wm. M.
Stowe, Richard L.
Votaw, Floyd C.
White, Leslie C.

Colorado
McChesney, A. C.
Nicholes, Max M.

Georgia
Fichandler, P. D.
Thrasher, J. P. Jr.

Illinois
Winslade, Jack L.

Indiana
Blood, Benjamin D.

Iowa
Rafoth, Leslie J.
Rossing, Tedmar D.
Smith, Earl P.
Thompson, F. W. Jr.

Kansas
Burkert, Lester H.
Donahue, Dennis R.
Flory, Oliver E.
Lumb, William V.
Minnis, Russell G.
Mohney, Leonard W.
Porter, Henry D.
Swenson, Melvin J.
Wagers, Robert P.

Louisiana
Caraway, Hugh L.

Maine
Liscomb, John M.

Minnesota
Crawford, Frank W.
Foelschow, L. O.
Isaacson, Lloyd L.
Penticuff, C. M. Jr.

Mississippi
Rhoades, Mervin G.

Missouri
Ingmand, Eugene B.
Hayes, Eldon F.

Nebraska
Cook, Raymond H.
Kelsall, Samuel

New Jersey
Harrison, John H.
McCoy, John R.
Swope, Robert E.

New York
Becker, Milford E.
Charles, Arthur S.
Conklin, Erwin A.
Everly, William P.
Kirvin, William R.
Wright, F. O.

Ohio
Carl, Gilbert W.
Hicks, Joseph M.
Lusk, David E.
Patton, Clyde A.

Pennsylvania
Altaker, Robert R.
Deubler, James A.
Mackey, W. L. Jr.
Mattern, George W.

Tennessee
Llewellyn, Lew O.

Texas
Jones, Claude K.
Scruggs, John H.

Virginia
Harman, C. C.
Larsen, Burt W.

Washington
Harris, Fred M.

Proceedings, Eighty-Third Annual Meeting American Veterinary Medical Association Boston, Mass., August 19-22, 1946

Opening Session

(The Business Sessions of the House of Representatives were published in the October Journal,
pp. 307-334.)

Monday Afternoon, August 19, 1946

The opening session of the Eighty-third Annual Meeting of the American Veterinary Medical Association, held at the Hotel Statler, Boston, Mass., August 19-22, 1946, convened at 1:30 p. m., President James Farquharson presiding.

PRESIDENT FARQUHARSON: I now declare the Eighty-third Annual Meeting of the American Veterinary Medical Association in order.

The invocation will be given by the Reverend Daniel J. Donovan, executive secretary, Holy Name Society, Archdiocese of Boston.

Invocation

REV. DANIEL J. DONOVAN: In the name of the Father and of the Son and of the Holy Ghost, Amen.

Bless us, O Lord, in this gathering which we convene. Enlighten the hearts and minds of all, so they may give of their best to the deliberations of these sessions.

Grant that all that will be worked out through these days may redound to the humaneness of animals, charity, and fraternity among men, and the eternal glory of God.

In the name of the Father and of the Son and of the Holy Ghost, Amen.

. . . Singing of "The Star-Spangled Banner." . . .

PRESIDENT FARQUHARSON: The Governor has not arrived as yet, so we will proceed to the next part of the program. It is a pleasure to introduce Mrs. Preston Hoskins, president of the Women's Auxiliary. She will bring greetings from the Women's Auxiliary. Mrs. Hoskins! (Applause.)

. . . Mrs. Hoskins presented her address. . . (Applause.) (See October JOURNAL, p. 248.)

PRESIDENT FARQUHARSON: Thank you, Mrs. Hoskins.

While we are still waiting for the Governor, we will have some announcements by Dr. E. M. Aldrich, general chairman of the Committee on Local Arrangements.

. . . Dr. E. M. Aldrich made announcements. . . . The audience arose and applauded as Honorable Maurice J. Tobin, Governor of the Commonwealth of Massachusetts, was escorted to the platform. . . .

PRESIDENT FARQUHARSON: The introduction of the next speaker will be made by Dr. Killian, chairman of our Entertainment Committee. Dr. Killian!

. . . Dr. Killian introduced the Governor, who gave the address of welcome. . . .

PRESIDENT FARQUHARSON: We will now have the response to the address of welcome of the Honorable Maurice J. Tobin by Dr. J. L. Axby. Dr. Axby!

(See October JOURNAL, p. 247, for address of welcome and response.)

PRESIDENT FARQUHARSON: Dr. Killian has some announcements to make at this time.

. . . Dr. Killian made the announcements. . . .

Greetings from Other Veterinary Associations

PRESIDENT FARQUHARSON: We have com-

munications from other veterinary associations which I will read to you at this time.

American Veterinary Medical Association: On behalf of the National Veterinary Medical Association of Great Britain and Ireland, I send cordial greetings and best wishes for the future to our colleagues in the United States. The Association congratulates the AVMA on its achievements in the past and looks forward with high expectation to continued progress in the future. May your convention be an outstanding success.

S/PRESIDENT GOULD.

(Applause.)

American Veterinary Medical Association: Taking opportunity annual meeting American Veterinary Medical Association, beg accept best greetings from Portuguese Society Veterinary Medicine to you and all veterinarians and veterinary institutions of your country. Expressing our greatest consideration and our desire of more close scientific exchange.

S/PRESIDENT PROFESSOR FIADEIRO.

(Applause.)

We are also honored this afternoon by a veterinarian from the republic across the border, and I would like to have him stand and take a bow. He has been here before; he is not a stranger to us. We hope he will come again. Dr. Camargo! (Applause.)

President's Address

Next on the program is the president's address.

. . . President Farquharson read his address, paper marked No. 1. . . . (Applause.) (Dr. Farquharson's address was published in the September and October issues of the JOURNAL.)

PRESIDENT FARQUHARSON: We have some awards to be made.

(See October JOURNAL, pp. 250-258.)

Nomination and Election of Officers

PRESIDENT FARQUHARSON: The following officers are to be nominated and elected at this annual meeting: the president-elect and five vice-presidents, first, second, third, fourth and fifth vice-presidents, and the treasurer. There are certain rules that govern the election. We will ask Dr. Hardenbergh to read those. Dr. Hardenbergh!

. . . Executive Secretary Hardenbergh read article III pertaining to the election of the president-elect. . . .

PRESIDENT FARQUHARSON: I suppose everyone understands the rules governing the election of officers. I will now entertain nominations for president-elect.

DR. HUGH S. CAMERON (Calif.): I take pleasure in nominating W. A. Hagan for president-elect.

PRESIDENT FARQUHARSON: Dr. W. A. Hagan has been nominated for president-elect.

DR. R. R. DYKSTRA (Kan.): Mr. President, Members of the Association: It has been my privilege to have been acquainted with this nomi-

nee for a good many years. I first knew him when he came to college as a freshman in 1911. I followed his career as a student and, I may say at this time, he was the outstanding member of his class, in fact, the outstanding member of the entire class of the college.

Then I saw him develop as an instructor. He became one of the foremost bacteriologists and pathologists in America. His textbook is standard in every veterinary school of the country. Many of us were sorry when he left the field as an educator, to an extent, and became an administrator, but in that field he has done even better than he did in any of the others. Today, his advice is sought upon all matters of veterinary interest.

I know of no man in America who has a greater acquaintanceship among the veterinarians of all nations than this man who has just been nominated. He is a man of high character. To use the words of our president, he is both aggressive and progressive. The veterinary profession has honored him in the past by making him a member of our Executive Board. He therefore understands what this association is doing, what it is trying to do, and what are its objectives.

I feel, then, for the good of the association, for the good of the veterinary profession in America and in the world, we can do no better than to elect Dean W. A. Hagan as president-elect.

It is my pleasure and my privilege to second this nomination.

DR. W. R. KRILL (Ohio): I want to say just a word in regard to the nomination of Dean Hagan as president-elect of this association. I consider it a real privilege and an honor to speak in behalf of that nomination. I have known Dean Hagan for several years, although I am one of the younger members of the profession. I have always enjoyed his counsel and his advice. He is a man who has always been very approachable, both to the students and the younger men in the profession. He also has been a leader in the veterinary profession. I am sure we look to him for guidance and look to him for leadership in charting the course of the future of our profession.

He has done a great deal of service to the veterinary profession both in the organization and outside the organization. It is a great pleasure, on my part, to third the nomination of Dean W. A. Hagan as president-elect of this association. (Applause.)

DR. LEONARD J. GOSS (N. Y.): I move the nominations be closed and the secretary cast the unanimous ballot for the election of Dr. Hagan as president-elect.

DR. E. A. WOELFFER (Mass.): I wish to second that motion.

PRESIDENT FARQUHARSON: It has been moved and seconded that the nominations be closed and the secretary cast a unanimous ballot for Dr. Hagan. All those in favor of the motion please signify by the usual sign; those opposed. Dr. Hagan, therefore, has been elected by unanimous ballot.

EXECUTIVE SECRETARY HARDENBERGH: In accordance with the instructions of this annual session, I hereby cast the unanimous ballot of the association for the election of Dr. W. A. Hagan, Ithaca, N. Y., for president-elect for the ensuing year.

PRESIDENT FARQUHARSON: The next is the nomination of five vice-presidents. They will be known as the first, second, third, fourth, and fifth vice-president. Dr. Hardenbergh will read the rules governing the election of the vice-presidents.

Executive Secretary Hardenbergh read article IV pertaining to the election of vice-presidents.

EXECUTIVE SECRETARY HARDENBERGH: In other words, gentlemen, if we are to avoid a

ballot election, which would have to take place all day tomorrow in the executive secretary's office and conflict with the attendance of the members at the session, I would point out if there are only five nominations for vice-presidents, it may facilitate the operation of this session.

PRESIDENT FARQUHARSON: I entertain nominations for first vice-president.

DR. A. E. CAMERON (Can.): I wish to nominate Dr. Ronald Gwatkin of Ottawa, chief research officer of the Department of Agriculture. He is a man who has had experience in every branch of veterinary science and is entirely suitable for such an office.

PRESIDENT FARQUHARSON: Do I hear a second to that nomination?

DR. CAMERON: You don't need a second.

DR. R. A. HENDERSHOTT (N. J.): I would like to place in nomination the name of Dr. Ralph West of Minnesota.

PRESIDENT FARQUHARSON: Dr. Ralph West, Sr. or Jr.?

DR. HENDERSHOTT: Senior.

DR. D. COUGHLIN (Tenn.): I present the name of Dr. Gillmann of Memphis, Tenn.

DR. T. E. FERGUSON (Wis.): I would like to nominate Dr. C. R. Curtis of Portage, Wis.

DR. J. V. LACROIX (Ill.): I second that nomination.

DR. L. R. BARTO (N. J.): I would like to nominate E. L. Stubbs, Philadelphia, Pa.

DR. FERGUSON: I move the nominations cease and we declare these men elected by acclamation.

. . . The motion was regularly seconded. . .

PRESIDENT FARQUHARSON: It has been moved and seconded that nominations close and that these men be elected by acclamation. All those in favor of the motion please signify by the usual sign; those opposed. The "ayes" have it. The following men, therefore, are elected:

First Vice-President—Ronald Gwatkin.

Second Vice-President—Ralph West, Sr.

Third Vice-President—John Gillmann.

Fourth Vice-President—C. R. Curtis.

Fifth Vice-President—E. L. Stubbs.

Next on the docket is the nomination of treasurer.

DR. A. E. CAMERON (Can.): I nominate Dr. Lacroix. His services have been eminently satisfactory.

. . . The nomination was regularly seconded. . .

PRESIDENT FARQUHARSON: Dr. Lacroix has been nominated. Any other nominations?

DR. T. E. FERGUSON (Wis.): I move that the nominations be closed and the secretary be instructed to cast the ballot for Dr. Lacroix as treasurer.

. . . The motion was regularly seconded. . .

PRESIDENT FARQUHARSON: It has been moved and seconded that the nominations for treasurer be closed and the secretary be instructed to cast a unanimous ballot. All those in favor please signify by saying "aye"; those opposed. Dr. Lacroix is elected treasurer.

EXECUTIVE SECRETARY HARDENBERGH: In accordance with the instructions of this eighty-third annual session, I hereby cast the unanimous ballot of the association for the election of Dr. J. V. Lacroix as treasurer of the association for the ensuing year.

PRESIDENT FARQUHARSON: Before adjournment, I want to announce that the chairmen of all the sections and sessions will please start the programs at the hour as announced on the program and adjourn at the time as indicated on the program.

I will entertain a motion for adjournment.

DR. H. PRESTON HOSKINS (Ill.): I move we adjourn.

... The motion was regularly seconded, put to a vote and carried. The meeting adjourned at 4:40 p. m. . . .

First General Session

Tuesday Morning, August 20, 1946

The first general session of the Eighty-third Annual Session of the American Veterinary Medical Association, held at the Hotel Statler, Boston, Mass., convened at 9:30 a. m., Dr. James Farquharson, Fort Collins, Colo., presiding.

PRESIDENT FARQUHARSON: The meeting will please come to order. The first number on the program this morning is an address, "So You Are a Member of the AVMA!" by Dr. H. L. Foust, Ames, Iowa. Dr. Foust!

... Dr. H. L. Foust read his paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: Thank you, Dr. Foust. Is there any discussion?

Before we continue, I want to call your attention to the very fine educational exhibits displayed in the lower foyer of the ballroom. They are exceptionally good exhibits, and you should take some time to go in and see them.

The next paper is entitled "Activities of the National Research Council's Committee on Veterinary Services for Farm Animals," by R. C. Newton, Chicago, Ill.

... Mr. R. C. Newton read his paper. . . . (Applause.) (Published in the October issue of the JOURNAL.)

PRESIDENT FARQUHARSON: We appreciate this most informative address that Mr. Newton has given us regarding the activities of the National Research Council's Veterinary Services. This is a problem we are glad they have taken over to try to solve for us, particularly the economics of it and where the veterinary profession stands with regard to public welfare.

This morning we have a slight change in the program. Instead of paper No. 3, "Some Observations on Veterinary Research in Korea," we are substituting "The Rôle of Veterinary Medicine in the Occupation of Japan." This paper is to be read by Major Fred D. Maurer, of the U. S. Army Veterinary Corps. Major Maurer!

... Major Fred D. Maurer read the paper by Colonel Oness H. Dixon. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: The next paper of the morning, the first of a symposium on antibiotic agents, is entitled, "The Susceptibility of Pathogenic Bacteria of Animal Origin to Penicillin," by I. A. Merchant and R. A. Packer, of Ames, Iowa.

... Dr. I. A. Merchant presented the paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: The next paper is on "Streptomycin in Experimental Infections and Its Possible Use in Veterinary Therapeutics," by Alfred G. Karlson and William H. Feldman, Rochester, Minn.

... Dr. Alfred G. Karlson presented the paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: Thank you, Dr. Karlson.

The last paper to be presented in this symposium on antibiotic agents is, "The Present Status of Streptomycin," by Dr. Henry Welch and Dr. William A. Randall, of Washington, D. C. This paper is to be presented by Dr. E. Moskey, of Arlington, Va.

... Dr. E. Moskey read the paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: This concludes the morning session.

... The meeting adjourned at 12:25 p. m. . . .

Second General Session

Tuesday Afternoon, August 20, 1946

The second session convened at 2:25 p. m., President Farquharson presiding.

PRESIDENT FARQUHARSON: The meeting will please come to order.

I have a telegram here to the AVMA of greetings from Dr. and Mrs. Mayo. This is to my knowledge one of the few meetings Dr. Mayo has ever missed in his long service with the association.

The first paper is on "Public Health Administration," by Warren G. Draper, of Washington, D. C.

... Dr. Draper read his paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: Thank you for that excellent paper on the part that the veterinarian will possibly play in the future. Is there any discussion?

If not, the next paper is "Veterinary Preventive Medicine in Civil Affairs and Military Government in Northwest Europe from D Day to V Day." This paper was submitted by Lt. Colonel Frank A. Todd, V.C., U. S. Army, U. S. Zone, Germany. Dr. Todd is not here, and the paper will be read by Lt. Colonel William Jennings, V.C., U. S. Army. Colonel Jennings!

... Colonel Jennings read the paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: The next paper this afternoon is entitled, "The Army Veterinary Service," by Colonel James A. McCallam, V.C., U. S. Army, Washington, D. C., and chief of the Veterinary Division of the Surgeon-General's Office.

... Colonel James A. McCallam read his paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: I want to thank you, Colonel McCallam. I am sure the members appreciated the information you gave them.

The rest of the afternoon will be occupied with the showing of motion pictures. The first is on the ruminant stomach, a picture taken by H. H. Dukes, professor of Veterinary Physiology, New York State Veterinary College. Dr. Dukes will comment on this film as it is shown.

The second film is by A. H. Schalk and his associates in the College of Veterinary Medicine of Ohio State University. It is a colored sound film. The third picture, "Surgery in General Practice," consists of three short films by H. M. Austin, showing cases encountered in general practice. Dr. Austin will be present to comment on the films as they are shown. I call on Dr. Dukes, Cornell University.

Dr. Dukes! (Applause.)

(Running comment on motion picture.) (To be published.)

... Dr. B. T. Simms assumed the Chair. . . .

CHAIRMAN SIMMS: Dr. Farquharson has to leave to attend a meeting, and asked me to continue in his stead.

The next film on the program is "Gastro-Fistula Technique and the Interior of the Bovine Stomach," by Dr. Schalk and his associates from the College of Veterinary Medicine, Ohio State University. I am informed that this is a sound film, and consequently we will not need anyone to explain it as it grinds.

(Showing of film.) (Applause.) (Commentary to be published.)

CHAIRMAN SIMMS: Next we have on the program three films by Dr. Austin, a practitioner of Belcherstown, Mass., of cases he has had in general practice. We will ask him to explain these films to us as they run. Dr. Austin!

(Showing of film.) (Applause.) (Commentary to be published.)

... The meeting adjourned at 5:40 p. m. . . .

Third General Session

Wednesday Morning, August 21, 1946

The meeting convened at 11 a. m., President Farquharson presiding.

PRESIDENT FARQUHARSON: Before starting on the regular program there are one or two announcements. Dr. Kelser!

DR. KELSER: Ladies and Gentlemen: I hope by this time that most of you know of the program which the AVMA has undertaken with a view to raising within the ranks of the veterinary profession a considerable sum of money to form the nucleus of a large sum which it is hoped we can raise to promote veterinary research.

The terrible global conflict from which we have so recently emerged demonstrated, as it never had been demonstrated before, the enormous importance and value of scientific research. The problem of supplying throughout the war many of the critically needed materials from which we were cut off as a result of the war (and which we supplied in spite of those handicaps) and finally, the development of the atomic bomb which we recognize played an important rôle in bringing to a successful and abrupt end the war in the Pacific, emphasized the importance of scientific research.

In medical research, generally, endeavor in the field of veterinary science has resulted over the years in many important contributions to medical science. Some of the epoch-making, basic findings came out of research in the veterinary field. To obtain the amount of money necessary to establish fellowships, appointing young and promising individuals to such fellowships to continue graduate study in appropriate places, later to go into our colleges and research institutions to carry out our research program, we are in a campaign now.

Quotas have been allocated to the various states and the District of Columbia based on the number of veterinarians located within the states and the District; the results to date have been very gratifying. As a matter of fact, the goal of \$100,000 within the professional ranks has been more than half met within a relatively short time. Out in the lobby, close to the registration desk, are a series of thermometers indicating the status of the fund with respect to the amounts raised by the different states. I hope you will look at that exhibit, that you will tell everyone with whom you come in contact the purpose of this fund, ask them to get behind it, and if their state lags a bit, to help boost it and promote this very worthy project.

We have no doubt but that it is going to go well over the top, and in that position we can then go to other sources to augment it and bring it up to the amount that we feel will be necessary to carry out this program. (Applause.)

PRESIDENT FARQUHARSON: This morning this association is honored by the presence of two distinguished guests and speakers. I have asked Dean Kelser to make the introduction.

DEAN KELSER: In the early days of the war, when it became apparent that the Axis powers would resort to every means at their disposal, be they fair or foul, in the prosecution of their part of the war, it was not without the realm of possibility that we might find ourselves in the position of having to put up a defense against biological warfare. It goes without saying, and it is unnecessary for me here to enumerate, the various indications of that possibility. The so-called file of column activities and various means of sabotage which became evident early in the war indicated that possibility. The Secretary of War had the subject brought to his

attention in many ways from several sources, and he put it in the hands of the National Academy of Sciences for a report to him, and advice as to what the possibilities might be and what would be their recommendation with regard to means for defense against such a type of warfare.

After a considerable study, the Academy reported. Then it became evident that it would be necessary on our part to coordinate the activities in building up the defense, to coordinate the activities not only of the Army but of the Navy, Public Health Service, the Department of Agriculture, and with those agencies a close liaison and cooperation and collaboration with our principal allies.

That immediately called for the centralization of this coordinated program in the hands of one individual who would have a breadth of vision necessary to successfully tie all of these ends together and keep the program running smoothly, an individual not only with great executive ability but also with organizing talent, with the ability to deal with various officials in different departments, with foreign governments and representatives, and at the same time, do this on a very highly secret level and keep the program on such level.

It was, therefore, no easy task to locate such a man. Finally, after considerable thought and investigation, such a man was found. The program was set up. The individual was approved by the President of the United States. He made those contacts and carried on this very important, highly secret (at that time) line of work, and did it in a way that brought the thing to a successful conclusion.

That gentleman is Mr. George W. Merck, president of Merck & Co., and throughout the war period special consultant to the Secretary of War in biological warfare. It gives me very great pleasure to introduce to this audience Mr. George W. Merck! (Applause.)

. . . Mr. George W. Merck read his prepared paper. . . . (Applause.) (To be published.)

DEAN KELSER: The next speaker whom it is my great pleasure to introduce hardly needs an introduction to a veterinary audience. While a physician, he is devoted to the study of the diseases of animals, particularly those of virus origin. As Mr. Merck has indicated, when it became necessary to select the most competent individual to undertake the directorship of Grosse Isle project on rinderpest, the commission and others who were in on the plan were unanimous in indicating that, if we could get this particular man, our problem would be solved and the success of this project assured.

Through the generosity of the Rockefeller Foundation and the personal sacrifices of the individual, we were able to get this particular man. A member of the Rockefeller Institute for Medical Research, an individual whose work is known internationally, a commander in the U. S. Naval Reserve, he went to Grosse Isle and did the piece of work that resulted in a very successful conclusion for the first biological warfare project. I take great pleasure in introducing Dr. Richard E. Shope. Dr. Shope! (Applause.)

. . . Dr. Richard E. Shope read his prepared paper. . . . (Applause.) (To be published.)

PRESIDENT FARQUHARSON: The two papers just given are a wonderful demonstration of what can be accomplished through research, particularly cooperative work of this nature.

Mr. Merck and Dr. Shope, on behalf of the members of the American Veterinary Medical

Association, we wish to express our appreciation and thanks for these excellent presentations.

... The meeting adjourned at 12:40 p. m. . . .

Fourth General Session

Thursday Morning, August 22, 1946

The fourth general session convened at 11:15 a. m., President Farquharson presiding.

PRESIDENT FARQUHARSON: The first paper this morning in the general session will be "The Composition of Colostrum and Its Value in the Nutrition of the Newborn Dairy Calf," by Dr. T. S. Sutton, Columbus, Ohio.

... Dr. Sutton read his paper. . . . (Applause.)
(To be published.)

PRESIDENT FARQUHARSON: Thank you, Dr. Sutton.

The next paper will be "Rabies Can Be Controlled," by Dr. Alexander Zeissig, of Cornell University, Ithaca, N. Y.

... Dr. Zeissig read his paper. . . . (Applause.)
(To be published.)

PRESIDENT FARQUHARSON: Thank you, Dr. Zeissig.

The next on the proceedings this morning is the installation of officers. Dr. Sugg, will you please conduct Dr. Simms to the platform?

... President-elect Simms was escorted to the platform by Dr. Sugg. . . .

PRESIDENT FARQUHARSON: Dr. Hastings, will you conduct Dr. Hagan to the platform?

Dr. Cameron, will you conduct Dr. Gwatkin to the platform?

Dr. Marsh, will you conduct Dr. West to the platform, or Dr. Ferguson, will you conduct Dr. West to the platform?

Dr. Barr, will you conduct Dr. Gilmann to the platform? (Absent.) Will you conduct Dr. Curtis?

Dr. Hoskins, will you conduct Dr. Stubbs to the platform, please?

Dr. Marsh, will you conduct Dr. Lacroix to the platform?

... President Simms assumed the chair. . . .

PRESIDENT SIMMS: President Farquharson, Ladies and Gentlemen: I want to present to you our five vice-presidents whom we will install at this time. I am sure they are well known to all of you. First is Dr. Ronald Gwatkin of Canada, our first vice-president. Next, Dr. Ralph West, Sr., Minnesota, second vice-president.

Dr. C. R. Curtis of Wisconsin, fourth vice-president.

Our third vice-president, Dr. John Gilmann of Memphis, is not here.

Dr. E. L. Stubbs, of Pennsylvania, our fifth vice-president.

Our treasurer, as we all know, was reelected yesterday, Dr. J. V. Lacroix of Chicago.

I know I express to you gentlemen the feelings of the entire association in saying that we know that you fully deserve the recognition that you have received. We fully expect that you will measure up to any calls that may be made upon you for service to the organization. I congratulate the organization as well as you upon your having been selected. (Applause.)

I am reliably informed, authoritatively informed, in fact, that this concludes the official program, and a motion for adjournment is in order.

DR. FERGUSON (Wis.): Mr. President, I move we adjourn.

... The motion was regularly seconded, put to a vote, and was carried. . . .

PRESIDENT SIMMS: The meeting is adjourned.

... The meeting adjourned at 12:20 p. m. . . .

Banquet Session

Wednesday Evening, August 21, 1946

The annual banquet was held in the ballroom of the Hotel Statler, Toastmaster W. A. Hagan, dean of New York State Veterinary College, Cornell University, Ithaca, N. Y., presiding.

... Invocation by Rev. E. J. Woodbury, First Baptist Church, Somerville, Mass. . . .
Dinner. . . .

DR. BERTRAM S. KILLIAN: Ladies and Gentlemen: I have the honor to introduce our toastmaster this evening, Dr. William A. Hagan, dean of the New York State Veterinary College at Cornell University, a distinguished veterinarian who, among others during the war, was called upon to serve for nearly a year as special assistant to the chief of the federal Bureau of Animal Industry. He also was sent to Berlin after V-E Day to serve as special consultant to the Public Health and Welfare Division, Office of Military Government, Allied Forces. President-elect of the American Veterinary Medical Association, Dr. Hagan! (Applause.)

TOASTMASTER HAGAN: Thank you, Dr. Killian. Good evening, ladies and gentlemen: I will start the program this evening by making an announcement of something I learned only shortly before we came into this room, and which made me very happy because it represents an achievement, something that many of us have been aiming at for some years and had little hope would come to pass so soon.

It has come to pass. I understand from Dr. Simms that, on October 1 of this year, the Meat Inspection Division of the Department of Agriculture is to be returned to the Bureau of Animal Industry. (Applause.)

I am sure that is good news to the veterinary profession. We have felt for some years that it was a setback for the profession in this country that a service which had been created, built, and operated for so many years by veterinarians had been separated from the Bureau which we also regard as our possession, or rather, our special outlet in the government service.

The late Irvin S. Cobb used to tell of a couple of northern businessmen who were at one time in a southern city. They chanced to go to a hotel for breakfast that had made a great deal of their fine food. These two men were ready for breakfast as the colored waiter came to the table. They looked over the menu and one said, "Well, I eat rather a standard breakfast usually. I like a good breakfast. Half a melon, ham and eggs, buttered toast, and coffee."

The darkie said, "Yassuh."

The other man said, "That sounds all right to me, except that is a little heavy. Make it the same thing for me, but eliminate the eggs."

The darkie stiffened. "How does you want dem eggs cooked?"

He said, "Eliminate them." He saw the darkie's trouble immediately, and decided he would have some fun with him. "Just eliminate them," he said.

The darkie said "Yassuh," and returned to the kitchen. A little while later he came back and said, "Boss, wud it be awright with you to scramble dem eggs, or maybe have a nice omelet? We make mighty good omelets here."

And the man said, "No, sir, I don't want them scrambled. What's the matter with your cook? Doesn't he know how to eliminate eggs?"

"Yassuh," said the darkie, "we have a fine chef, and I 'spect he kin 'liminate eggs. I'll git 'em."

He went back to the kitchen again, and they listened then to the sound of argument back and forth for quite a while. Finally the waiter

turned up once more, rolled his eyes to the ceiling, and said, "Boss, guess you-all will have to take those eggs fixed up some other way. Trouble is, we had a big nigger working for us, and yesterday when he wuz cleanin' up de kitchen he drapped de eliminator on the floor and clean broke the handle off our eliminator." (Laughter.)

Tonight we are going to have a streamlined program for dinner, because we have some other affairs later this evening. It will be brief, and we have eliminated some of the things we usually have on a program of this type. I am also going to eliminate some of the things the toastmaster frequently says, and plunge directly into the introduction of our principal and only speaker.

This speaker, I think, can be characterized first and foremost as a farmer. He is a dirt farmer and lives on a farm. He operates the

farm himself. But he is not an ordinary farmer in any sense of the word. He is an extraordinary farmer, because he has a lot of ideas. He is continually experimenting. He is a research-minded individual who has carried research down to the farming level. I think that on his farm we have had some of the earliest innovations. I believe he had one of the first farm freezers in America. He will tell you more about that before he gets through, I am sure. He went into grass silos early, and he is now interested in pen stabling of dairy cattle.

He is constantly developing new ideas, and he uses at his experiment station the information gathered from everywhere. This man, in addition to farming, finds time for doing many other things. I will not undertake to tell you all he does, because it would take a great deal of time, and I will eliminate now the material I might

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give you along that line since I feel sure you are familiar with his accomplishments. This man has had constantly other irons in the fire while he has been farming these years. He has been associated with Cornell for many years. The only thing we have against him is that he graduated from Syracuse. But we are willing to forget that, since he has lived that down. Perhaps I should not even have mentioned it here.

He came to Cornell and I think his first connection was as county agricultural agent. Later on, he became a farm bureau leader. He was in the College of Agriculture in one capacity or another. It is characteristic of the man that he likes to take a new job and, when he has licked the main spots, he turns it over to somebody else and moves on to something else. So he has been shifting from one job to another, doing a good job all these years.

One of the things he did was to leave the University a few years ago and establish the GLF Exchange operating in New York, Pennsylvania, and New Jersey. He became the first general manager of that great enterprise. He got it going and then resigned after ten years in characteristic fashion.

He began then to take charge of research work and other activities. During World War I, he was on the government food commission of New York State. He has been interested in food for a long time. During World War II, he has served as chairman for a time of the food commission of New York State. He resigned after he got that going, and let somebody else carry on. That is the type of man he is.

This man has a lot of ideas about the food of the country, and he has ideas on where the veterinarian fits into the picture. It is largely

of the Boston Statler Was a Capacity Affair



for that reason that he was invited to speak here this evening, and I know he has an interesting story to tell. He has ideas that will perhaps be new to some of us. Certainly, he will point out certain things about the functions, the greater and increasing functions of the veterinary profession, to which we must look forward in the future.

This man I have been introducing to you (and perhaps I have overdone it) is Mr. Howard E. Babcock, who is at the present time chairman of the Board of Trustees of Cornell University. Mr. Babcock has done a good deal of writing. His articles have appeared in *American Agriculturist*, and no doubt many of you have seen them. He has also had a number of articles in *Country Gentleman*, all of them having to do with better farming and living. He had one some time back, "I'm Sticking with Live Stock." Mr. Babcock chose that for the title of his talk to us. It is a great pleasure to introduce Mr. Howard E. Babcock, our speaker. (Applause.) . . . Mr. Babcock presented his address. . . . (Applause.) (To be published.)

TOASTMASTER HAGAN: Mr. Babcock, I am not going to quarrel with you on the matter of whether or not you are a dirt farmer. I have seen you in overalls. (Laughter.) At any rate, he does live on a farm, and he is fairly close to the soil even if he does have somebody between him and the soil frequently.

I know the applause you have just received will carry to you, Mr. Babcock, the appreciation of your audience. You have a message that is very striking, in which the veterinarian plays a rôle. I am sure the audience appreciates the pointing out of that rôle which we have to play.

The remainder of the program is simple. I have to introduce some guests, and we will proceed as rapidly as we can. First I present the president of the AVMA, Dr. Farquharson and Mrs. Farquharson. (Applause.)

Next president-elect, taking office at the end of this meeting, Dr. Simms and Mrs. Simms. (Applause.)

Now our Canadian cousins to the north represented by Dr. and Mrs. Cameron. (Applause.)

Next, Dr. and Mrs. H. Preston Hoskins. Mrs. Hoskins is president of the Ladies Auxiliary. (Applause.)

Dr. and Mrs. Hardenbergh. I don't need to tell you who they are. (Applause.)

Dr. and Mrs. Merillat, Dr. Merillat being editor of the association's JOURNAL. (Applause.)

Mrs. Hagan. (Applause.)

Colonel and Mrs. McCallam, Colonel McCallam being chief of the Veterinary Division of the Surgeon-General's office. (Applause.)

Dr. and Mrs. Hastings, Dr. Hastings being chairman of the Executive Board. (Applause.)

Dr. and Mrs. Lacroix, Dr. Lacroix being treasurer of the association. (Applause.)

Dr. and Mrs. Klussendorf. Dr. Klussendorf is associate editor of the publication. (Applause.)

Dr. and Mrs. Aldrich. Dr. Aldrich is chairman of the local committee. (Applause.)

Dr. and Mrs. Schnelle, vice-chairman of the local committee. (Applause.)

Dr. and Mrs. Woelffer. Dr. Woelffer is general secretary of the local committee. (Applause.)

Dr. and Mrs. Killian, Dr. Killian being chairman of the entertainment committee. (Applause.)

Dr. and Mrs. Murphy, Dr. Murphy being chairman of the equipment committee. Mrs. Murphy is chairman of women's activities. (Applause.)

We have several guests from the floor I would like to call to their feet. First, E. V. Wilcox, of Washington, D. C., who is distinguished in the field of agriculture and agricultural publications, and for many years an honorary member of the AVMA. (Applause.)

Another, Dr. William H. Dodge, Leominster,

Mass., graduate of American Veterinary College, class of 1892, admitted to AVMA membership in the same year at the time of the AVMA meeting in Boston. He has been one of our most faithful attendants at our meetings and at most state association meetings since that time, fifty-four years ago. (Applause.)

At the beginning of the evening, my attention was called to the fact by Dr. Farquharson that we probably have more ex-presidents here this evening than in many previous meetings, more than we can remember, at any rate. I am going to ask those previous presidents, past presidents, if they will kindly stand when I call their names and remain standing. We will greet all of them at once.

In the order of seniority (I hope I have these right), the first is Dr. John R. Mohler. Next, Dr. L. A. Merillat. Next, Dr. T. H. Ferguson; Dr. R. R. Dykstra; Dr. R. S. McKellar; Dr. H. D. Bergman; Dr. Cassius Way; Dr. A. E. Wight; Dr. Harry W. Jakeman. I must apologize for missing Dr. Jakeman earlier. And finally, Dr. C. W. Bower. (Applause.)

There is just one further thing. I understand Dr. R. W. Smith, of New Hampshire, has something he would like to present at this time.

DR. R. W. SMITH: Mr. Toastmaster, Fellow Practitioners, Veterinarians, Invited Guests, and Friends: A number of years ago a veterinarian came to the city of Boston, and because of the love for his profession and his untiring work with the veterinarians of New England, he is loved, respected and honored by all of us.

In 1930, he with a few others organized the New England Veterinary Medical Association. He was elected our secretary-treasurer, and has served us down through the years. In 1941, as president-elect of our parent association, this present organization, the American Veterinary Medical Association, it is my understanding that he helped to organize the Research Council of our organization, and last night at a special meeting of the New England Veterinary Medical Association, the first meeting that has been held since war was declared, it was voted that we appropriate the sum of one thousand dollars to be given to the Research Council in honor of the man of whom I have spoken, Dr. Harry Jakeman, of Watertown, Mass.

Dr. Lacroix, in giving you this check, I know that I speak the minds of every veterinarian not only in New England but in this country, that it is our wish that the results that will come from this Research Council will enable us to meet the problems of the future and accept the challenges of the future as we have accepted them in the past.

Thank you! (Applause.)

DR. LACROIX: Dr. Smith, on behalf of the Research Council of the American Veterinary Medical Association, I take pleasure in accepting this check which you tender, and I sincerely hope that it will be the means of completing the job which we have started. Let that which faces us in this completion be a challenge to all, whether you have contributed or not. There are some here, perhaps, who have not yet subscribed.

Thank you, Dr. Smith! (Applause.)

TOASTMASTER HAGAN: Dr. Killian has one further item.

DR. KILLIAN: Mrs. Farquharson, on behalf of the Committee on Local Arrangements, we wish to present to you these roses. (Applause.)

Mrs. Simms, on behalf of the Committee on Local Arrangements, we wish to present you also with these roses. (Applause.)

TOASTMASTER HAGAN: The President's reception and dance will be held in the Georgian Room. Will you please retire to the Georgian Room at your convenience?

. . . The meeting adjourned at 10:20 p. m. . . .

Section on General Practice

Wednesday Morning, August 21, 1946

The first session of the Section on General Practice, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 9:10 a. m., Dr. F. H. Suits, Odessa, Mo., chairman of the section, presiding.

CHAIRMAN SUITS: Before opening the section program, Dr. Simms has a three-minute talk on the Research Fund. We will hear from Dr. Simms.

DR. SIMMS: Mr. Chairman, Ladies, and Gentlemen: I have been asked to say just a very few words to you concerning our Research Fund which we are trying to raise among the members of our association. This has been explained to you in letters; it has been explained at the meetings here, so I am sure that you are acquainted with the general purpose of it, the method of raising it, and I will not take your time to give further explanations on those points.

I do want to call your attention to two things, though, in this brief period. One is this: the progress which has been made. The remarkable progress which has been made in all fields of science, industry, and art in the last several years has been the direct result of research. You can talk to any man in the industrial field and he will tell you that, in his work, from 2 to 4 or 5 per cent of the gross income of the industry concerned is being turned back into the research field. We see those figures time after time. For instance, the vice-president of Du Pont Company made the statement that the most progressive, the most active people, the leaders in his field, were putting from 4 to 5 per cent of their gross income in research. I call attention to that to show you what other people are doing.

If we are to keep up with the procession, we, too, must put a fairly considerable part of the gross income of the veterinary profession and of the livestock industry into research.

The second thing I want to say is this: Shortly after the meeting in Chicago last year, when it was decided to attempt to raise this fund from our own membership, I had an opportunity to appear before the Agricultural Board of the National Research Council. In fact, I was asked to appear before that board and tell them what the American Veterinary Medical Association was doing. The compliments that our profession got from that group of agricultural leaders were a source of surprise and gratification to me.

With one accord, when I explained what we were attempting to do, they complimented us very highly. They said it was not only a very fine thing but it was, in so far as they knew, practically unprecedented. They knew of no other profession, they said, no other group of scientific people, who had attempted on anything like as substantial a scale to raise funds to help their own group. They all voluntarily pledged their assistance in any way they could give it in getting funds for us from the industries which are associated with us, from those people who are our allies in the big livestock industry of the country.

I call your attention to their stand, because it indicated to me the general feeling on the part of the public, as a whole, toward this move on our part.

Finally, I will say that I have been very much gratified at the fine progress we are making. Some of the states, as you will notice in the display downstairs, have already gone over the top; I believe two. Many of the others are moving up quite satisfactorily. The committee tells me they feel reasonably sure we will achieve our goal. It

is just simply up to each and every one of us to do our full part.

I thank you for this opportunity to come before you. I believe, with all my heart, that this is the right move. I think none of us will ever regret the funds we put in, and with every confidence in the will to do, on the part of our veterinary profession, I know that we will accomplish our task. (Applause.)

CHAIRMAN SUITS: The Section on General Practice will now come to order. Members of the American Veterinary Medical Association and Guests: I am sure that your presence here is for the purpose of hearing the presentations as listed in the program instead of the chairman making a speech. Therefore, my remarks will be as brief as possible.

Perhaps you have noticed that the program for this section is somewhat overbalanced with cattle topics. We did not desire or plan it this way. With the assistance of able advisors we found it a simple matter to plan a balanced program, but our solicitation for speakers on horse and hog topics was declined, while much interest in, and many requests for, cattle discussions were evidenced.

We will dispense with the secretary's report, since Dr. Paul Neuzil, the secretary, is unable to be present owing to an emergency. Dr. Crispell of Kansas has kindly consented to act as secretary of this meeting.

First on our program is "Raising Heifer Calves on Mastitis Milk" by Seth D. Johnson of Ithaca, N. Y.

. . . Dr. Johnson read his paper. . . . (Applause.)
(To be published)

CHAIRMAN SUITS: We will allow just a minute for any questions you care to ask Dr. Johnson. If no questions, the second presentation is "Clinical Use of Sulfamerazine in the Treatment of Hemorrhagic Septicemia and Pneumonia in Cattle," J. L. McAuliff, Cortland, N. Y.

. . . Dr. McAuliff read his paper. . . . (Applause.)
(To be published)

The next presentation is "Some Sheep Diseases Common to Farm Flocks" by Frank Thorp of East Lansing, Mich.

. . . Dr. Thorp read his paper. . . . (Applause.)
(To be published)

CHAIRMAN SUITS: Next on our program is a panel discussion on poultry problems. We are indebted to Dr. B. S. Pomeroy of the University of Minnesota for developing this panel. He has handled the development of this from start to finish.

The moderator, Cliff Carpenter, needs no introduction to this group. We will now ask Dr. Carpenter to take over and introduce his panel.

. . . Dr. Cliff D. Carpenter, Chicago, Ill., assumed the chair. . . . (Panel discussion on poultry problems to be published)

. . . The meeting adjourned at 11:00 a. m. . . .

Section on Small Animals

Wednesday Morning, August 21, 1946

The first session of the Section on Small Animals, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 2:00 p. m., Dr. John H. Gillmann, Memphis, Tenn., chairman of the section, presiding.

CHAIRMAN GILLMANN: It is requested by the central office that the remarks of the chairman and secretary be brief. I want to welcome you to the first postwar small animal sectional

meeting. I am going to ask the secretary to be as brief as I have been, so we can get on with the program.

SECRETARY RIFE: Thank you, Dr. Gillmann. Ladies and Gentlemen: It has been a rather difficult problem to get a well balanced program. Your chairman and secretary have worked hard with our central office in securing the program we have today. We hope that you will enjoy it. We have tried to get speakers from various parts of the country, so that we would not be considered partial. Dr. Gillmann is from Memphis, Tenn., and I am from Atlanta, Ga. We like the south, but we really want to be impartial in all matters concerning the AVMA. We hope you like the program.

At this time I am going to ask Dr. Gillmann to call upon the first speaker.

CHAIRMAN GILLMANN: The first speaker on the program is Dr. G. B. Schnelle of Boston, Mass.

. . . Dr. Schnelle read his paper, entitled "Geriatrics in Canine Practice". . . (Applause.) (To be published.)

CHAIRMAN GILLMANN: You have just listened to a most interesting paper. Is there any discussion?

MEMBER: I wonder if Dr. Schnelle would repeat the formula for the euthanasia solution.

DR. SCHNELLE: Obviously, that doesn't have to be exact but we are making it double strength.

259.2 Gm. pentobarbital sodium
200 cc. 95 per cent alcohol
q.s. ad. 2000 cc. physiologic saline

We used to use water instead of physiologic saline, but if the pentobarbital sodium powder has not been very finely refined, some precipitation will recur later if water is used. There is less precipitation if saline solution is used. This, of course, doesn't have to be sterile saline. You can make it by adding tablets to the water.

CHAIRMAN GILLMANN: Any further discussion? If not, we will go on with the program. Our next paper is "Surgery of the Mammary Gland of the Bitch," Dr. Wayne D. Riser, Evanston, Ill.

. . . Dr. Riser read his paper. . . . (Applause.) (To be published.)

CHAIRMAN GILLMANN: Any discussion? If not, we will go on with the program as the time is getting late. The next is a panel discussion on canine distemper: Dr. C. P. Zepp, moderator; Dr. G. B. Schnelle, Dr. H. C. Stephenson, and Dr. A. C. Wood.

. . . Dr. C. P. Zepp assumed the chair. . . . (Panel discussion on canine distemper to be published.)

. . . The meeting adjourned at 4:10 p. m. . . .

Section on Small Animals

Thursday Afternoon, August 22, 1946

The second session convened at 2:15 p. m., Chairman Gillmann presiding.

CHAIRMAN GILLMANN: The meeting will please come to order.

The first paper this afternoon is "Ear Diseases: A Practitioner's Viewpoint," by Dr. C. E. DeCamp, of Scarsdale, N. Y.

. . . Dr. C. E. DeCamp read his paper. . . . (Applause.) (To be published.)

CHAIRMAN GILLMANN: If there is no further discussion, at this time Dr. Schnelle has a three-minute discussion for you.

DR. GERRY B. SCHNELLE (Boston, Mass.): This is a message to four groups of veterinarians. The first group consists of those beyond middle

age. To these men, I will say that the veterinary profession has done well for you. It has given you a good living, probably educated your children. If you have been in a medical profession devoted to the common good, you should be proud of this profession that hasn't stood still over the years you have been in it, and it must continue to progress. You owe it financial support in return for what it has given you. I ask you to give to the Research Fund. If you have given \$10, that is not enough. We want \$50 more.

The second group—those in middle age. The war years have been hard on this group. We have had to work hard and long. At the same time, to you, also, the war years have been profitable. All of you have profited financially by the conditions of practice induced by the war, by the scarcity of veterinarians, and the needs of the general public. You, as veterinarians, should be able to give and should give to the profession which has supported you so well. As in any successful business, you must now plow back part of your earnings to keep your business going. You should reinvest part of your income in your profession through the Research Fund. Give generously, please. It is for yourself that you give.

The third group comprises the young men and women veterinarians. The future is yours. You are members of a profession that is having growing pains. Two great universities and 12 state colleges are starting veterinary schools this fall. These colleges will be only as good as the teachers and men in them. There is a serious shortage of competent teachers to educate future veterinarians of this country and to undertake research problems which will supply you with tools which you need to continue your practice.

Unless the veterinary student of the future receives proper scientific training, the profession as a whole will suffer and you with it. You owe it to your future to give to the Research Fund.

The fourth group includes anyone missed in the previous classifications. This is your profession. You will rise or fall with it and, if you would have it rise, give to the Research Fund. (Applause.)

CHAIRMAN GILLMANN: Next is a paper, "A Discussion of Glaucoma," by Dr. Mason Weadon, of Washington, D. C.

. . . Dr. Weadon presented his paper. . . . (Applause.) (To be published.)

CHAIRMAN GILLMANN: If there is no further discussion, the next subject is "Nutrition of the Dog," by Dr. W. A. Krehl, of Madison, Wis.

. . . Dr. Krehl read his paper. . . . (Applause.) (To be published.)

(The Secretary, Dr. Charles C. Rife, of Atlanta, Ga., took the chair.)

CHAIRMAN RIFE: The last papers on the program comprise a panel discussion on "Penicillin in Small Animal Practice." Dr. H. C. Stephenson, of Ithaca, N. Y., will act as moderator. We have one change in the panel. Due to the inability of Dr. Farquharson to be on the panel, Dr. Stanley E. Phillips, of Medford, Ore., will take his place, and the other members of the panel are Dr. David Hopkins, of Brattleboro, Vt., and Dr. C. P. Zepp, of New York, N. Y. Dr. Stephenson!

. . . Dr. H. C. Stephenson assumed the chair. . . . (Panel discussion on penicillin in small animal practice to be published.)

CHAIRMAN RIFE: Now we will go into a brief business session, and entertain nominations for

chairman of this section for the ensuing year.

DR. C. P. ZEPP (N. Y.): Next year our meeting is going to Toronto. We don't get there often. I think that, in order to tap the resources of talent in the small animal field in Canada, we should have a man from that area as chairman of the Small Animals Section because there are many details that will be involved in arranging his part of the program; therefore, I should like to nominate Dr. H. S. MacDonald, of Toronto, for chairman of the section.

. . . The motion was regularly seconded. . . .

CHAIRMAN RIFE: Are there any other nominations? If not, all in favor of Dr. MacDonald for the coming year, make it known by the usual voting sign.

. . . The motion was carried, and Dr. MacDonald was elected as chairman of the section. . . .

CHAIRMAN RIFE: Next we will have nominations for secretary.

DR. JOHN R. WELLS (Fla.): Mr. Chairman, there is one man who has been not only a regular attendant of these sessions for the past number of years but also has contributed both as a speaker and, as you might say, a manager of one of the most successful clinics the section has ever had, and that was in Washington, D. C., a number of years ago. I therefore would like to place in nomination the name of Dr. Mason Weadon, of Washington, D. C.

DR. ZEPP: Seconded.

CHAIRMAN RIFE: All in favor of Dr. Mason Weadon as secretary for the coming year, let it be known by the usual voting sign.

. . . The motion was carried, and Dr. Mason Weadon was elected secretary of the section. . . .

CHAIRMAN RIFE: Gentlemen, this concludes the program, and we appreciate your attendance this year, and we hope to meet you next year in Toronto.

. . . Thereupon the meeting adjourned at 5 o'clock. . . .

Section on Research

Wednesday Morning, August 21, 1946

The first session of the Section on Research, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 9:20 a.m., Dr. E. L. Stubbs, Philadelphia, Pa., chairman of the section, presiding.

CHAIRMAN STUBBS: The first paper on the program is "Vaccination Studies on Bovine Trichomoniasis," by Dr. Banner Bill Morgan, of Madison, Wis.

. . . Dr. Morgan read his paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Does anyone have any questions they would like to ask Dr. Morgan? If not, we will pass on to the next presentation, which is "Vibrionic Abortion in Cattle," by Dr. W. N. Plastridge, of Storrs, Conn.

. . . Dr. Plastridge read his paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: I am sure we will all look forward to better tests for this disease.

The next presentation is by Dr. W. Ralph LeGrow, of Ithaca, N. Y., on "The Relation of the Opsonic Index to Infection and Immunity in Bovine Brucellosis."

. . . Dr. LeGrow read his paper. . . . (Applause.) (To be published.)

The next presentation is by Dr. H. L. Gilman and Dr. W. Ralph LeGrow, of Ithaca, N. Y., on "The Bactericidal Action of Streptomycin Against Brucella Abortus."

. . . Dr. Gilman read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Thank you, Dr. Gilman. The next presentation by Dr. H. S. Cameron, of Davis, Calif., is entitled, "Experiments with Bovine and Porcine Gamma Globulin."

. . . Dr. Cameron read his paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Dr. Cameron's presentation is open for discussion. This is a new subject. Perhaps we don't have anybody who feels they want to discuss it. There may be questions.

DR. McCOMB: I would like to ask Dr. Cameron if he has used gamma globulin in working with horses or sheep.

DR. CAMERON: No. We are preparing some in sheep, now. We hope to do it in a number of the domestic animals. We undoubtedly will go into sheep.

CHAIRMAN STUBBS: Anyone else? Thank you, Dr. Cameron.

Our last presentation is by Dr. Morrill and Dr. Sampson, of the University of Illinois, entitled, "A Physiopathological Study of the Newborn Pig with Special Reference to Hypoglycemia."

. . . Dr. Morrill read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: It is regrettable we have no time for discussion, because President Farquharson has asked that we adjourn shortly. Dr. Boyd will speak to us for a few minutes.

DR. BOYD: Mr. Chairman, Ladies and Gentlemen: I appreciate the courtesy of the officers of this section in granting me the opportunity of being here. I shall speak very briefly. My subject has to do with the AVMA Research Fund. To spend time in attempting to tell you about the needs and values of research and animal research control would be wasted; therefore, I shall spend just a few moments in an attempt to tell you a little about the progress the committee is making.

The Special Committee on Financing Research, Dr. J. V. Lacroix, Chairman, Dr. William A. Hagan, and Dr. C. C. Hastings, has gone to a great deal of trouble in developing a very fine demonstration or exhibit, and I would urge everybody to take just a few minutes off to visit the exhibit. It portrays very graphically the progress made up to date in the various states. Each and every one of us who is interested or engaged in active research can be of help to the committee, and although we have made a great deal of progress thus far, there still remains a lot of work to be done. So will you take this opportunity to visit the exhibit?

Thank you!

CHAIRMAN STUBBS: This section is charged with the responsibility of nominating section officers for the next meeting, which is listed on the program at the end of tomorrow's session. Will you please be thinking about this so we can make nominations with some consideration at the end of the session tomorrow.

This meeting will now be adjourned for the general session in the ballroom.

. . . The meeting adjourned at 11:00 a. m. . . .

Section on Research

Thursday Morning, August 22, 1946

The second session convened at 9:25 a. m., Chairman Stubbs presiding.

CHAIRMAN STUBBS: We will start off with the first paper, which is entitled, "The Blood in Periodic Ophthalmia," by Captain Thomas O. Roby, U. S. Army, and Major T. C. Jones, U. S. Army, Fort Robinson, Nebr.

. . . Captain Roby read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Is there any discussion or questions? If there are no questions, we will proceed with the next paper, which is entitled "Experiments to Determine the Rôle of the Thorny-headed Worm, Macracanthorhynchus Hirudinaceus, in the Occurrence of Disease in Hogs in Canada," by Drs. W. E. Swales, MacDonald College, and Ronald Gwatkin, Hull, Que.

. . . Dr. Swales read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: This topic is open for discussion or questions. Certainly little enough work is being done with hog cholera to justify most any type of investigation. Are there no questions? Thank you, Dr. Swales.

We shall pass on to the next topic, which is, "The Infusion of Penicillin into the Bovine Udder," by Drs. W. T. S. Thorp, Irene J. Uhrik, and E. J. Straley, State College, Pa.

. . . Dr. Thorp read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Our next topic is entitled, "The Genesis of Bovine Udder Infection and Mastitis: II. The Occurrence of Streptococcal Infection in a Cow Population During a Seven-year Period and Its Relation to Age," by Dr. J. M. Murphy, of Sussex, N. J.

. . . Dr. Murphy read his paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: Thank you, Dr. Murphy.

The next topic is "Anaplasmosis: Field and Laboratory Studies," by Drs. L. J. Poelma, C. I. Everson, K. S. Wilcox, and A. L. Brueckner, College Park, Md.

. . . Dr. Poelma read the paper. . . . (Applause.) (To be published.)

CHAIRMAN STUBBS: The last paper is to be read by title. Dr. Porter lost his life a short time ago in an automobile accident while returning from the Wisconsin State meeting. Therefore, his paper will be read by title, "The Effect of Volume of Distilled Water as a Vehicle for Penicillin in Treating Streptococcal Mastitis," by Dr. John J. Porter and Dr. Alva C. Kelman, of Madison, Wis. This will be included in the proceedings.

I should like to take this opportunity to thank each participant for his efforts to present information to us and to express my appreciation to them for that effort.

We will proceed now to the nominations. It is the privilege of this section to nominate a chairman and secretary for the next meeting. The duty of such officers is to select and prepare the program for the next meeting. The chair will entertain nominations.

DR. SWALES: I would like to nominate Dr. Ronald Gwatkin as chairman.

DR. JUNGHEER: I second the nomination.

DR. ROBERT GRAHAM (Urbana, Ill.): Mr. Chairman, I move that nominations for chairman of the section be closed, and that the present chairman cast the unanimous ballot for Dr. Gwatkin.

. . . The motion was seconded, put to a vote, and was carried. . . .

CHAIRMAN STUBBS: I hereby cast the ballot for Dr. Ronald Gwatkin as chairman.

May we have nominations for secretary?

DR. GRAHAM: I would like to nominate Dr. Murphy, who was on the program this morning, for secretary.

. . . The nomination was seconded. . . .

CHAIRMAN STUBBS: The name of Dr. James M. Murphy has been placed in nomination for secretary of the Section on Research.

. . . A motion was made, duly seconded and carried, that nominations be closed and the chairman be instructed to cast the unanimous ballot for Dr. Murphy. . . .

CHAIRMAN STUBBS: I hereby cast the ballot

for Dr. James M. Murphy as secretary of the Section on Research.

Mr. Secretary, have you anything to bring before the section?

DR. GRAHAM: No.

CHAIRMAN STUBBS: Does anyone have anything else to bring before the section before we adjourn? If not, the section is adjourned.

. . . The meeting adjourned at 11:00 a. m. . . .

Section on Surgery and Obstetrics

Wednesday Afternoon, August 21, 1946

The first session of the Section on Surgery and Obstetrics, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 2:15 p. m., Dr. A. G. Danks, Ithaca, N. Y., chairman of the section, presiding.

CHAIRMAN DANKS: Gentlemen, the meeting will come to order.

One of the first items of business is the fact that John F. Bullard, secretary of the section, cannot be with us. In a recent communication, he stated that, through circumstances over which he had no control, he could not attend, and we regret it very much. Dr. E. R. Frank, of Kansas State College, Manhattan, Kan., has kindly consented to act as secretary. We are grateful to him for so doing.

Dr. Bullard has done a great deal of work during the year to make this program a successful one for this session, and I hoped to have the opportunity to thank him personally for the great effort he has put forth in connection with our meeting.

It is customary in our meetings that tomorrow afternoon we make nominations or recommendations to the president of the AVMA for chairman and secretary of the section for the coming year. You can be thinking about whom you may wish to nominate. In all probability, the meeting will be held in Toronto, and it would be very convenient if the men nominated were from somewhere in that area rather than from a more distant section of the country.

Those nominations from the section are made to the president, and it has been usual in the past for the president to appoint those men chairman and secretary of the section for the following year.

The first order of business is the report of the secretary. I can best read from Mr. Bullard's letter with reference to his report:

"I have no formal report to make. If the opportunity should present itself, you might tell them for me that all I would like to report is that I would like to thank all of the members who are taking part in the program for accepting our invitation. I am especially anxious to thank Dr. Klussendorf for his generosity in taking over the responsibility of the symposium on insemination. He was very kind to do it, and I wish to thank him very much for it, as it has relieved me of considerable work."

That is all of the report. We will now get down to the business of the section.

The first paper this afternoon is by an author I have a great deal of pleasure in presenting. I have been acquainted with him as a friend and teacher for the past seventeen years. I can think of nothing that would give me more pleasure than to present Professor J. N. Frost, professor of Surgery and director of the Surgical Clinic at Cornell University, to speak on 'Lame-

ness of the Harness Horse." Professor Frost! (Applause.)

... Dr. J. N. Frost read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN DANKS: I think we will have to proceed with the next paper.

... Announcement in regard to the Research Fund. . . .

CHAIRMAN DANKS: The next paper to be presented is by F. A. Hall, a practitioner of Garrett, Ind. He will speak on "Teat Surgery of Cattle." Dr. Hall!

... Dr. F. A. Hall read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN DANKS: The next paper was prepared by Dr. F. N. Andrews, assistant professor of Animal Husbandry at Purdue University, and will be read by Dr. C. L. Donham, head of the Division of Veterinary Science at Purdue. The topic, "Endocrine Therapy in Veterinary Medicine."

... Dr. C. L. Donham read the prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN DANKS: Thank you, Dr. Donham. In the absence of Dr. Andrews, we will have to pass over questions or comments on this paper.

This completes our program for this afternoon.

... The meeting adjourned at 4:10 p. m. . . .

Section on Surgery and Obstetrics

Thursday Afternoon, August 22, 1946

The second session convened at 2:15 p. m., Chairman Danks presiding.

CHAIRMAN DANKS: Gentlemen, if we may have your attention, we will call the meeting to order.

As I mentioned yesterday at the opening meeting of this section, Dr. Bullard, secretary of the section, was unavoidably detained at Purdue and was unable to be here. Dr. E. A. Churchill, professor of Surgery at the University of Pennsylvania Veterinary College, has kindly consented to act as secretary *pro tem*. We thank him for his service in this respect.

We will now get on with the program scheduled for this afternoon. The first speaker on the program, Dr. E. C. Moore, a practitioner of Lewiston, Maine, will speak to us on "Rumenotomy of the Dairy Cow." Dr. Moore!

... Dr. Moore read his paper. . . . (Applause.) (To be published.)

CHAIRMAN DANKS: Thank you, Dr. Moore, for this interesting discussion of a rather common operation in bovine practice. We must get along with our program as rapidly as possible.

The next presentation is that of Dr. L. A. Gendreau, of Sherbrooke, Province of Quebec. Dr. Gendreau is a practitioner who has had considerable experience with bovine obstetrics and surgery. I am happy to present him to discuss "Torsion of the Uterus and Cesarean Section." Dr. Gendreau! (Applause.)

... Dr. L. A. Gendreau read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN DANKS: If there are no further questions at this time, we will proceed with the program. I would like to thank both speakers for their presentations.

The next part of our program is somewhat of a deviation. There has been considerable interest in the veterinary profession, as evidenced by letters to the secretary and the chairman of this section, on the subject of artificial insemination, particularly the amount of participation that the veterinary profession should have in this program.

Dr. Bullard was particularly fortunate in obtaining the coöperation and the services of Dr. R. C. Klussendorf, assistant secretary of the AVMA, in developing this panel. Dr. Klussendorf is especially well qualified to be the moderator of this panel because of his close association through correspondence and intimate contact with many practitioners in the problems they meet with this situation in the field; because of Dr. Klussendorf's past experience as a practitioner in Wisconsin he has the viewpoint of the subject from many angles.

It gives me great pleasure at this time to present Dr. Klussendorf as moderator of this panel. He will introduce to you the other speakers. Dr. Klussendorf!

... Dr. Klussendorf read his prepared remarks, as did the other panel speakers. A question and answer period followed. . . . (To be published.)

CHAIRMAN DANKS: I want to thank Moderator Klussendorf and the speakers who have contributed to this program. I would also like to thank Dr. Church for acting as secretary this afternoon.

The president of the AVMA has requested that each section nominate one or more members for chairman and secretary of the section for the coming year. We should bear in mind the fact that in all probability the meeting next year will be held in Toronto, and we should perhaps nominate one or more individuals from that particular area.

... The name of Dr. Gendreau was suggested; also, Dr. Emerson, of Ames, Iowa; Dr. R. M. Sears, Cazenovia, N. Y., for chairman of the section. Following this, the name of Dr. Bryan, of Michigan State College, was suggested; also, Dr. J. A. Henderson, of Toronto, for secretary of the section for the ensuing year. . . .

CHAIRMAN DANKS: These names will give President Simms a choice; if one man is not available, probably another will be.

That concludes the business of the section. We declare the section adjourned.

... The meeting adjourned at 4:45 p. m. . . .

Section on Sanitary Science and Food Hygiene

Wednesday Morning, August 21, 1946

The first session of the Section on Sanitary Science and Food Hygiene, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 9:10 a. m., Dr. L. D. Frederick, Chicago, Ill., chairman of the section, presiding.

CHAIRMAN FREDERICK: Greetings, Brother Veterinarians and Visitors: We are sorry to be late in starting, but the boat ride took quite a while last night, and it made us a little late.

Dr. W. T. Spencer, our good friend and secretary, was unable to attend due to personal matters which required his being at home. He sends his regrets. I presume it is in order to ask one of the members of the section to act as secretary. Dr. Grist, would you please act as secretary for the morning session?

I want to say that it has been an extreme pleasure for me to act as your chairman since 1942. Although we have had no official section meetings, there has been considerable work to do, particularly in the form of correspondence and the handling of the association's matters pertaining to this section. I wish to thank all the brother veterinarians who have been so coöoperative and have made this work a pleasure.

The first paper on the morning program is one by our state veterinarian of Minnesota, Dr. Ralph

L. West, on "The Application of Sanitary Science in the Control of Livestock Diseases." Dr. West! . . . Dr. Ralph L. West read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN FREDERICK: Dr. West, we greatly appreciate the thought and care you have put into the preparation of this paper. It is an excellent one and full of meat for thought and for action.

Are there any questions? Though we must hold down the discussion because of time, we could have a question or two on this valuable paper. If there are none, we will proceed with the next item, making a slight change in order that Colonel Derrick will be able to get away early. Dr. Young has consented to change places on the program with Dr. Derrick, who will discuss "Sanitary Problems of Army Fish Inspection." Colonel Jesse D. Derrick, V.C., U. S. Army, Boston, Mass.!

. . . Colonel Jesse D. Derrick read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN FREDERICK: Colonel Derrick, you have given us a wealth of information in this paper on an unusual phase of food hygiene. We greatly appreciate your appearance here.

The next paper on the program is one by Dr. Wesley A. Young, chairman of the National Livestock Loss Prevention Board, on the subject of "The History and Development of Livestock Loss Prevention Work." Dr. Young!

. . . Dr. W. A. Young read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN FREDERICK: Without further ado, I wish to introduce Colonel Benjamin D. Blood, V.C., U. S. Army, who will speak on the subject, "Veterinary Sanitary Problems of the Air Transport." Colonel Blood!

. . . Colonel Blood read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN FREDERICK: That completes the program for this morning.

. . . The meeting adjourned at 11:10 a. m. . . .

Section on Sanitary Science and Food Hygiene

Thursday Morning, August 22, 1946

The second session convened at 9:15 a. m., Dr. L. D. Frederick, chairman of the section, presiding.

CHAIRMAN FREDERICK: I think we had better get started so as to use all the time we have.

Who will volunteer to act as secretary this morning? Dr. Spencer could not come because of sickness in the family. Dr. Rouse, will you act as secretary this morning?

This is the second session of the Section on Sanitary Science and Food Hygiene. The first paper this morning is one I know you will all enjoy. You would enjoy it even more if you could be at Colorado Station and see the cattle, the actual specimens they have as a result of the important work that has been done.

Without further ado, I take great pleasure in introducing Dr. Rue Jensen, who will discuss "Telangiectasis, Sawdust, and Abscesses in the Livers of Beef Cattle." Dr. Jensen!

. . . Dr. Jensen read his paper. . . . Applause. (To be published.)

CHAIRMAN FREDERICK: Thank you, very much, Dr. Jensen, for that very fine paper on this subject. It was very close to some of us for quite a while, and apparently we are beginning to get pretty definite indications of what is going on.

Next on the program is the panel discussion on the subject of "The Veterinarian in Public

Health Work." I will turn the meeting over to Dr. James H. Steele, of the U. S. Public Health Service. Dr. Steele!

. . . Participants in the discussion were: Drs. James H. Steele, Washington, D. C., moderator; V. A. Getting, Boston, Mass.; Paul Brandy, Washington, D. C.; and Martin D. Baum, Los Angeles, Calif.

. . . The panel discussion was presented. . . . (Applause.) (To be published.)

CHAIRMAN FREDERICK: The next order of business is the selection of chairman and secretary for next year. This does not constitute a real election; it is merely the selection of two individuals from the group to head the section next year. This is a suggestion to the president for the appointment of these individuals.

(Dr. James H. Steele, Washington, D. C., was unanimously chosen as chairman of the section. Dr. H. T. Shull, of Texarkana, Ark., was chosen as secretary of the section.)

CHAIRMAN FREDERICK: I declare the meeting adjourned for 1946.

. . . The meeting adjourned at 11:35 a. m. . . .

Section on General Practice

Thursday Morning, August 22, 1946

The second session convened at 9:10 a. m., Chairman Suits presiding.

CHAIRMAN SUITS: The General Practice Section will now come to order.

The first presentation on our program this morning is "Cattle Scabies in the Northeastern States" by Dr. Donald W. Baker of Ithaca, N. Y.

. . . Dr. Donald W. Baker read his paper. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: Time is slipping by. We will allow just one moment for discussion from the floor. Any questions?

The second presentation is "Milk Fever as a Manifestation of Alkalosis," by Dr. A. H. Craige. We practitioners so often wish for a solution of these problems. We will be glad to hear from Dr. Craige.

. . . Dr. Craige read his paper. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: I am sorry; we simply do not have time to permit discussion of Dr. Craige's most interesting paper.

The next paper is "Report of Field Control Experiments with Swine Brucellosis." Dr. Hutchings is not present. His paper will be read by Dr. Cameron of the University of California.

. . . Dr. Hugh S. Cameron read the paper prepared by Dr. Hutchings. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: Time will not permit any discussion of Dr. Hutchings' paper. We thank Dr. Cameron for reading it.

The next is "Muscular Dystrophy or White Muscle Disease of Young Calves," by Dr. Vawter and Dr. Records of Reno, Nev. Dr. Vawter!

. . . Dr. L. R. Vawter read the paper prepared by himself and Dr. Records. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: The next is a symposium on vaccination against bovine brucellosis, by Dr. Dykstra, Dr. Birch, and Dr. Crawford. We are forced to request the speakers to hurry along as fast as they can.

Dr. L. A. Dykstra, Aurora, Ill., will be the first speaker on the advantages of vaccination against brucellosis.

. . . Dr. Dykstra read his paper. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: Limitations of brucellosis

vaccination, Dr. R. R. Birch, New York State Veterinary College. Dr. Birch!

... Dr. Birch read his paper. . . . (Applause.) (To be published.)

CHAIRMAN SUITS: We are very sorry we have encroached upon the time of the general session. We are going to have to dispense with the summarization by Dr. Crawford.

We are advised to take one minute of time for nominations, instead of election of officers for this section. Will Dr. Dykstra act as secretary here? We will now have three nominations for chairman of the Section on General Practice.

Who will you have for chairman of the Section on General Practice? Let's have some nominations. We are crowded for time. Will someone make a nomination for chairman?

DR. R. A. HENDERSHOTT (N. J.): I would like to nominate Dr. C. C. Hastings of Illinois.

CHAIRMAN SUITS: Any other nominations? If we have no more nominations, it looks like we have Dr. Hastings.

Now nominations for secretary. Who will you have for secretary? Let's have three nominations.

MEMBER: Dr. L. A. Dykstra!

CHAIRMAN SUITS: Any further nominations? If not, that will make a good pair.

We will now turn the meeting over to the general session.

... The meeting adjourned at 11:20 a. m. . . .

Section on Poultry

Wednesday Afternoon, August 21, 1946
(Joint Session with Section on Research)

The first session of the Section on Poultry, held in connection with the Eighty-third Annual Session of the American Veterinary Medical Association, at the Hotel Statler, Boston, Mass., convened at 2:30 p. m., Dr. E. M. Dickinson, Corvallis, Ore., chairman of the section, presiding.

CHAIRMAN DICKINSON: We regret the delay in getting this session started. There are going to be no opening remarks by the chairman. I am sure we are all anxious to get under way with the AVMA meetings and the Poultry Section.

We are especially happy to have a joint session with the research group. In spite of the shortness of time, we hope that our program will be such that we may have time for discussion.

The secretary informs me he has no report, so our first speaker is Dr. Cunningham, who will talk on "Cultivation of the Virus of Infectious Bronchitis of Chickens in Embryonated Chicken Eggs." Dr. C. H. Cunningham and Dr. H. O. Stuart, East Lansing, Mich.

... Dr. Cunningham read his paper. . . . (Applause.) (To be published.)

CHAIRMAN DICKINSON: Thank you, Dr. Cunningham. We have a few moments for questions. Apparently you have done a good job.

The next paper to be presented is entitled "Escherichia Coli in the Blood Stream of Adult Fowls Affected with the Ocular Form of Fowl Paralysis," by Dr. A. J. Durant and Dr. H. C. McDougle, Columbia, Mo.

... Dr. Durant read the paper. . . . (Applause.) (To be published.)

CHAIRMAN DICKINSON: The next paper on the program is, "Antigenic Differences in Strains of *Salmonella Pullorum*," by Dr. Ronald Gwatkin.

... Dr. Gwatkin read his paper. . . . (Applause.) (To be published.)

CHAIRMAN DICKINSON: Thank you very much, Dr. Gwatkin.

We are asked to disregard the notice that at

4:00 p. m. there will be moving pictures. There will be no moving pictures this afternoon.

For those of you who are specially interested in this Poultry Section, I wish to draw attention to the fact that at the close of the Poultry Section meeting tomorrow afternoon we have nominations for officers of the section, and I would like to have you keep this in mind, and politic or not politic, do what you wish, but at least keep in mind that we must nominate a chairman and a secretary.

We will proceed with the program. The next section will be a symposium. Dr. F. R. Beaudette, moderator of the symposium on Newcastle disease, will take over from here on.

... Dr. Beaudette took the chair. . . .

DR. BEAUDETTE: The first paper is "Isolation, Identification of, and Immunization with, the Virus of Fowl Plague," by Dr. H. E. Moses of Lafayette, Ind.

... Dr. Moses presented his paper. . . . (Applause.) (Published in the July issue of the *American Journal of Veterinary Research*.)

CHAIRMAN BEAUDETTE: Thank you, Dr. Moses.

The next paper is "Isolation and Identification of and Immunization Against Newcastle Disease Virus," by Dr. C. A. Brandy, Madison, Wis., and Dr. E. Elizabeth Jones, Wellesley, Mass. (Published in the July issue of the *American Journal of Veterinary Research*.)

The first part of this paper, that is, the isolation and identification of Newcastle disease virus, is to be presented by Dr. E. Elizabeth Jones.

... Dr. Jones presented her paper. . . . (Applause.) (Published in the July issue of the *American Journal of Veterinary Research*.)

CHAIRMAN BEAUDETTE: Thank you, Dr. Jones.

The last part of this paper, namely, the immunization against Newcastle disease virus, will be presented by Dr. Carl A. Brandy of the University of Wisconsin.

... Dr. Brandy presented his paper. . . . (Applause.) (Published in the July issue of the *American Journal of Veterinary Research*.)

CHAIRMAN BEAUDETTE: Thank you, Dr. Brandy.

The next paper is "Differentiative Pathology of Fowl Plague and Newcastle Disease," by Dr. E. Jungherr, Storrs, Conn., and Dr. E. E. Tyzzer, Boston, Mass.

... Dr. Jungherr presented his paper. . . . (Applause.) (Published in the July issue of the *American Journal of Veterinary Research*.)

... The meeting adjourned at 6:30 p. m. . . .

Section on Poultry

Thursday Afternoon, August 22, 1946

The second session convened at 2:15 p. m., Chairman Dickinson presiding.

CHAIRMAN DICKINSON: We have had a few typographical errors in our program which may interfere with people arriving. The detailed program says 2:00 p. m., and the abridged program says 2:30, so we are splitting the difference in order to try and get on with our papers.

The first paper for discussion is "Food Particle Size and Quality in Relation to Disease in Artificially Propagated Quail Chicks," by Dr. Don R. Coburn and Dr. Ralph B. Nestler, of Bowie, Md.

... Dr. Coburn read the paper. . . . (Applause.) (To be published.)

CHAIRMAN DICKINSON: The next paper for consideration is "The Use of Propylene Glycol

as an Incubator Fumigant," by Dr. Earl N. Moore, Newark, Del.

. . . Dr. Moore read his paper. . . . (Applause.)
(To be published.)

CHAIRMAN DICKINSON: Thank you very much, Dr. Moore.

We are going to have to move along with our program. We have decided, since this is the closing session, to change our program just a bit and call for nomination of officers for the Poultry Section, while we are assured of a good attendance.

At this time, we will call for the nomination of section officers. I think most of you realize that this is merely a nomination; it is not an election. The nominations will be recommended to President Simms.

First, I will entertain nominations for chairman of the Poultry Section.

MEMBER: I nominate Dr. B. S. Pomeroy.

. . . The nomination was seconded, and a motion made and seconded that the chairman cast the unanimous ballot of the group. . . .

CHAIRMAN DICKINSON: It has been moved and seconded that the nomination of Dr. B. S. Pomeroy be made unanimous.

. . . The motion was voted upon and carried. . . .

CHAIRMAN DICKINSON: Dr. Pomeroy is nominated for chairman.

The next nomination is for secretary.

DR. HURST: I would like to nominate Dr. Delaplane for secretary.

CHAIRMAN DICKINSON: Dr. John Delaplane is nominated for secretary.

DR. MOORE: I second the nomination.

CHAIRMAN DICKINSON: Are there any other nominations?

DR. VAN ROEKEL: As I understand it, the next meeting may be in the Twin Cities.

CHAIRMAN DICKINSON: I have heard a lot of rumors. Does anyone know if it has been definitely settled?

DR. HURST: It was considered in the House of Representatives that it be in Canada.

CHAIRMAN DICKINSON: Dr. Van Roekel, I didn't mean to interrupt you.

DR. VAN ROEKEL: I thought if we had a man nearer to either of those two places to act as secretary, it might be a little better for organizing the program.

CHAIRMAN DICKINSON: We are still open for nominations.

I know when I was nominated as chairman, I was on the other side of the nation, and I opposed it, because I didn't think I would be here. So I don't think that we should always consider the distance.

DR. JOHN DELAPLANE: Inasmuch as there is a chance that this meeting will be held in Canada, and in view of the fact that someone nearby could better arrange the program, I would like to nominate Dr. Wickware.

CHAIRMAN DICKINSON: Dr. Wickware's name has been placed in nomination.

. . . The nomination was seconded. . . .

CHAIRMAN DICKINSON: Are there any other nominations?

DR. A. B. WICKWARE: Mr. Chairman, I appreciate having been nominated, but I feel that it is much more in order to nominate some of the older members of the section, or someone who is possibly nearer. If Dr. Delaplane would withdraw his nomination, I would like to have his name stand and make it unanimous.

CHAIRMAN DICKINSON: He shakes his head; he won't withdraw the nomination.

I do not feel that distance should be a criterion for withdrawing. I can speak from experience there.

Are there any other nominations? If not, I declare the nominations closed, and we will have a vote by ballot on the secretary. I should like to appoint Dr. Rosenwald and Dr. Hurst as tellers. We will proceed with the next paper and announce the results of the election later.

The next paper is entitled "The Use of Sulfonamides in Outbreaks of Cecal Coccidiosis," by Dr. W. E. Swales.

. . . Dr. Swales read his paper. . . . (Applause.)
(To be published.)

CHAIRMAN DICKINSON: Dr. Rosenwald, will you report for the tellers?

DR. ROSENWALD: The secretary for the coming year is Dr. John S. Delaplane of Kingston, R. I.

CHAIRMAN DICKINSON: The next paper is "The Chemotherapy of Cecal Coccidiosis," by Dr. W. T. S. Thorp, Dr. Stephen Gordeuk, Jr., Dr. Paul I. Glantz, and Dr. Marison Learned, State College, Pa.

. . . Dr. Thorp read the paper. . . . (Applause.)
(To be published.)

CHAIRMAN DICKINSON: Now we are ahead of time. The last paper in the section is by our good friend, the secretary of this section, Ben Pomeroy, and at this time I want to take the opportunity to tell you that if you have enjoyed this Poultry Section meeting, the papers presented, and everything, he is the man who has been responsible for it, and as chairman, I have thoroughly enjoyed that position, because he carried the ball and he has arranged for the entire program. I feel he has done an exceptionally fine job for us, and I am very heartily grateful for the privilege of serving as chairman of this section and enjoying the program that Dr. Pomeroy has arranged for us.

The last paper is entitled, "Sulfonamides in Pullosis Disease and Paratyphoid Infections of Chicks and Poulets," by Dr. B. S. Pomeroy, Dr. R. Fenstermacher, and Dr. M. H. Roepeke, St. Paul, Minn.

. . . Dr. Pomeroy read the paper. . . . (Applause.)
(To be published.)

CHAIRMAN DICKINSON: I think we have had a very fine session, and in closing, I would like to call on your new chairman for a few remarks.

DR. POMEROY: I would like to say that I appreciate the co-operation received from the men that I contacted for this program. After all, you are the ones that made this program, not I, by any means.

John, do you have any comments?

DR. DELAPLANE: The only thing I have to say is, I will have you to lean on and help me out this next year. I hope to do as well as you.

. . . The meeting adjourned at 4:45 p. m. . . .

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- W. L. Boyd, **Chairman**, Division of Veterinary Science, University Farm, St. Paul 8, Minn. (Representing Research and Education) (1952).
 *James Farquharson, **Secretary**, Division of Veterinary Medicine, Colorado A. & M. College, Ft. Collins, Colo. (Representing Clinical Sciences) (1950).
 *W. A. Aitken, Merrill, Iowa (Representing General Practice) (1952).
 Col. Seth C. Dildine, Canal Winchester, Ohio. (Representing Military Service) (1950).
 Garth A. Edge, Provincial Department of Public Health, Toronto, Ont. (Representing Public Health) (1951).
 *W. A. Hagan, New York State Veterinary College, Cornell University, Ithaca, N. Y. (Representing Basic Sciences) (1948).
 S. W. Haigler, 7645 Delmar Blvd., St. Louis 5, Mo. (Representing Small Animal Practice) (1948).
 C. C. Hastings, Williamsville, Ill. (Representing Large Animal Practice) (1947).
 M. S. Shahan, Pathological Division, Bureau of

*These three members comprise the Executive Committee of the Council and are elected by the Executive Board; the remaining members are appointed by the president.

Animal Industry, U. S. Department of Agriculture, Washington 25, D. C. (Representing Government Service) (1949).

Legislation

- J. G. Hardenbergh, **Chairman, ex-officio**, 600 S. Michigan Ave., Chicago 5, Ill.
 C. C. Franks, 1133 44th St., Des Moines 11, Iowa. (1948).
 George W. Gillie, 1522 House Office Bldg., Washington 25, D. C. (1950).
 H. C. Givens, 1102 State Office Bldg., Richmond, Va. (1951).
 N. J. Miller, Box 335, Eaton, Colo. (1949).

Resolutions

- M. Barker, **Chairman**, 780 Confederation Bldg., Ottawa, Ont.
 J. G. Hardenbergh, **Secretary, ex-officio**, 600 S. Michigan Ave., Chicago 5, Ill.
 H. D. Bergman, Iowa State College, Ames, Iowa.
 E. R. Cushing, 947 Prospect Ave., Plainfield, N. J.
 J. S. Healy, 330 Federal Bldg., Madison 3, Wis.
 R. A. Hendershott, 33 Oak Lane Ave., Trenton 8, N. J.
 Grant B. Munger, 1921 First Ave. E., Cedar Rapids, Iowa.
 J. M. Sutton, Sylvester, Ga.

Biological Products

- H. E. Biester, **Chairman**, Iowa State College, Ames, Iowa. (1948).
 G. H. Good, 304 Capitol Bldg., Cheyenne, Wyo. (1949).
 Ashe Lockhart, 800 Woodswether Rd., Kansas City 6, Mo. (1951).
 D. I. Skidmore, 4452 Volta Pl. N.W., Washington 7, D. C. (1947).
 F. H. Suits, Odessa, Mo. (1950).

Therapeutic Agents and Applicances

- H. H. Dukes, **Chairman**, State Veterinary College, Cornell University, Ithaca, N. Y. (1951).
 A. N. Carroll, 410 W. Fourth St., Pueblo, Colo. (1947).
 R. C. Klussendorf, **ex-officio**, 600 S. Michigan Ave., Chicago 5, Ill.
 J. V. Lacroix, Box 550, Evanston, Ill. (1949).
 H. E. Moskey, Food and Drug Administration, Washington 25, D. C. (1948).
 John L. Wells, 1817 Holmes St., Kansas City 8, Mo. (1950).

Public Relations

- C. F. Schlotthauer, **Chairman**, Division of Experimental Medicine, The Mayo Foundation, Rochester, Minn. (1948).
 Clifton D. Lowe, 3429 Oakwood Terrace N.W., Washington 10, D. C. (1951).
 A. H. Quin, Jr., 239 East 72nd Terrace, Kansas City 5, Mo. (1949).
 E. C. W. Schubel, Blissfield, Mich. (1947).

Cassius Way, 25 Vanderbilt Ave., New York 17, N. Y. (1950).

Poultry

P. V. Neuzil, *Chairman*, Blairstown, Iowa. (1948).

C. A. Brandly, Department of Veterinary Science, University of Wisconsin, Madison, Wis. (1951).

John P. Delaplane, Rhode Island State College, Kingston, R. I. (1950).

W. R. Hinshaw, 222 Rice Lane, Davis, Calif. (1949).

Frank Thorp, Jr., Michigan Agricultural Experiment Station, East Lansing, Mich. (1947).

Nutrition

A. H. Groth, *Chairman*, Regional Laboratory, Animal Disease Research, Auburn, Ala. (1950).

George H. Hart, Division of Animal Husbandry, University Farm, Davis, Calif. (1947).

C. C. Hastings, Williamsville, Ill. (1948).

H. M. LeGard, 355 Main St. N., Weston, Ont. (1949).

Hubert Schmidt, College Station, Texas. (1951).

Registry of Veterinary Pathology Army Institute of Pathology

W. H. Feldman, *Chairman*, The Mayo Foundation, Rochester, Minn. (1948).

Major T. C. Jones, V. C., Army Institute of Pathology, Army Medical Museum, Seventh and Independence Ave. S.W., Washington, D. C. (1949).

H. W. Schoening, Chief, Pathological Division, Bureau of Animal Industry, Department of Agriculture, Washington 25, D. C. (1947).

Col. J. E. Ash, M.C., curator, American Registry of Pathology, Army Medical Museum, Washington, D. C. (Consulting member.)

Special Committees

History

L. A. Merillat, *Chairman*, 453 East 87th Pl., Chicago 19, Ill.

J. M. Arburua, 26 Fell St., San Francisco 21, Calif.

C. E. Cotton, 4502 Drexel Ave., Minneapolis 10, Minn.

George H. Glover, 149 Sylvan Court, Fort Collins, Colo.

John R. Mohler, 1620 Hobart St. N.W., Washington 9, D. C.

L. Van Es, 3335 W St., Lincoln, Neb.

Nomenclature of Diseases

H. C. H. Kernkamp, *Chairman*, Division of Veterinary Science, University Farm, St. Paul 8, Minn.

F. R. Beaudette, New Jersey Agricultural Experiment Station, New Brunswick, N. J.

J. D. Beck, 39th St. and Woodland Ave., Philadelphia 4, Pa.

M. A. Emmerson, Division of Veterinary Medicine, Iowa State College, Ames, Iowa.

G. H. Hart, University Farm, Davis, Calif.

J. H. Helwig, 1503 W. Sixth Ave., Columbus 8, Ohio.

I. A. Merchant, Iowa State College, Ames, Iowa.

Carl Olson, Jr., Paige Laboratory, Massachusetts State College, Amherst, Mass.

Benj. Schwartz, Zoölogical Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C. (Consulting Member).

Frank Thorp, Jr., Michigan State College, East Lansing, Mich.

Parasitology

W. E. Swales, *Chairman*, Institute of Parasitology, MacDonald College, P.O. Quebec, Que.

W. S. Bailey, 408 West Magnolia Ave., Auburn, Ala.

D. W. Baker, New York State Veterinary College, Cornell University, Ithaca, N. Y.

Hugh S. Cameron, Division of Veterinary Science, University Farm, Davis, Calif.

G. Dikmans, Bureau of Animal Industry, Beltsville Research Center, Beltsville, Md.

Wendell H. Krull, Colorado A. & M. College, Fort Collins, Colo.

R. E. Rebrassier, Veterinary Clinic, The Ohio State University, Columbus 10, Ohio.

J. N. Shaw, 335 North 25th St., Corvallis, Ore.

Food and Milk Hygiene

O. W. Seher, *Chairman*, Meat Inspection Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C.

G. H. Hopson, 165 Broadway, New York 6, N. Y.

H. E. Kingman, Jr., 350 Walnut St., Elmhurst, Ill.

E. M. Lynn, 8052 Calumet Ave., Chicago 19, Ill.

James H. Steele, Senior Assistant, San. (R), States Relations Division, U. S. Public Health Service, Washington, D. C.

Diseases of Food-Producing Animals

L. R. Vawter, *Chairman*, University of Nevada, Reno, Nev.

I. B. Boughton, Box 5518, Sonora, Texas.

Frank Breed, 2940 Georgian Court, Lincoln 2, Neb.

H. E. Kingman, Sr., Wyoming Hereford Ranch, Cheyenne, Wyo.

R. N. Shaw, 788 Turnpike Rd., Shrewsbury, Mass.

Diseases of Wild and Fur-Bearing Animals

L. J. Goss, *Chairman*, New York Zoölogical Park, 185th St. and Southern Blvd., New York, N. Y.

J. E. Shillinger, Highland, Howard County, Md.

E. R. Quorup, Patuxent Research Refuge, Bowie, Md.

Motion Picture Library

- Jack R. Dinsmore, *Chairman*, North Shore Animal Hospital, 1817 Church St., Evanston, Ill.
 C. E. Bild, Box 515, Little River Sta., Miami 38, Fla.
 A. G. Boyd, Department of Agriculture, State Office Bldg., Sacramento 14, Calif.
 A. G. Danks, New York State Veterinary College, Cornell University, Ithaca, N. Y.
 J. D. Gadd, 707 York Rd., Towson 4, Md.
 C. B. Krone, Box 189, LaGrange, Ill.

Veterinary Services

- H. L. Foust, *Chairman*, Department of Anatomy, Iowa State College, Ames, Iowa.
 J. A. Barger, 301 Old Colony Bldg., Des Moines 9, Iowa.
 Col. Seth C. Dildine, Canal Winchester, Ohio.
 M. G. Fincher, 118 Delaware Ave., Ithaca, N. Y.
 E. A. Grist, Poultry Veterinary Extension Service, Texas A. & M. College, College Station, Texas.
 Kenneth G. McKay, 1054 Cragmont Ave., Berkeley 8, Calif.

National Board of Veterinary Examiners

- W. R. Krill, *Chairman*, 2656 Tremont Rd., Columbus 8, Ohio.
 Chas. W. Bower, 3119 Stafford St., Topeka, Kan.
 W. L. Boyd, University Farm, St. Paul 8, Minn.
 R. R. Dykstra, Kansas State College, Manhattan, Kan.
 R. A. Kelser, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa.
 I. D. Wilson, Virginia Polytechnic Institute, Blacksburg, Va.

Enforcement of Code of Ethics

- S. W. Haigler, *Chairman*, 7645 Delmar Blvd., St. Louis 5, Mo.
 R. A. Merrill, Clara City, Minn.
 R. C. Snyder, Walnut St. and Copley Rd., Upper Darby, Pa.

Joint Committee on Foods

- J. G. Hardenbergh, *Chairman*, 600 S. Michigan Ave., Chicago 5, Ill. (AVMA) (1951).
 Louis A. Corwin, 136-21 Hillside Ave., Jamaica, L. I., N. Y. (AAHA) (1948).
 J. B. Engle, P. O. Box 432, Summit, N. J. (AVMA) (1949).
 S. W. Haigler, 7645 Delmar Blvd., St. Louis 5, Mo. (AAHA) (1947).
 H. W. Schoening, Chief, Pathological Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C. (1950).

Sub-Committee on Veterinary Items National Formulary Committee (Ten-Year Appointment)

- H. D. Bergman, *Chairman*, Iowa State College, Ames, Iowa.
 R. F. Bourne, Colorado A. & M. College, Fort Collins, Colo.
 P. W. Burns, Texas A. & M. College, College Station, Texas.

C. F. Cairy, Michigan State College, East Lansing, Mich.

***Awards
(Ex-Officio)***

- B. T. Simms, *Chairman*, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C.
 M. Barker, 780 Confederation Bldg., Ottawa, Ont.
 W. H. Feldman, 926 Eighth Ave. S.W., Rochester, Minn.
 C. C. Hastings, Williamsville, Ill.
 E. P. Johnson, Box 593, Blacksburg, Va.

***Twelfth International Veterinary Congress Prize
(Ex-Officio)***

- B. T. Simms, *Chairman*, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C.
 W. A. Hagan, New York State Veterinary College, Cornell University, Ithaca, N. Y.
 C. C. Hastings, Williamsville, Ill.
 Col. James A. McCallam, Veterinary Division, Office of the Surgeon General, U. S. Army, Washington 25, D. C.

Humane Act Award

- W. A. Young, *Chairman*, 157 W. Grand Ave., Chicago 10, Ill.
 J. A. Campbell, 2722 Yonge St., Toronto, Ont.
 E. F. Schroeder, 21 Wachusett Ave., Arlington, Mass.

Inter-American Veterinary Congress

- B. T. Simms, *Chairman*, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C.
 M. Barker, 780 Confederation Bldg., Ottawa, Ont.
 Charles W. Bower, 3119 Stafford St., Topeka, Kan.
 Guillermo Q. Bravo, Director General, Livestock Division, Department of Agriculture, Mexico, D.F.
 F. N. Camargo, Ajusco 2, Villa Obregon, Mexico City, Mexico.
 Richard T. Gilyard, 73 Field St., Waterbury, Conn.
 J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill.
 Guillermo P. Lockhart, Presidente Berro 2730, Montevideo, Uruguay.
 Col. J. A. McCallam, Veterinary Division, Office of the Surgeon General, U. S. Army, Washington 25, D. C.
 Col. Russell McEllis, American Embassy, Lima, Peru.
 Carlos M. Muniz, University of Puerto Rico, Rio Piedras, P. R.

Research Council

- ANATOMY AND HISTOLOGY.**—L. E. St. Clair, College of Veterinary Medicine, University of Illinois, Urbana, Ill. (1949).

BACTERIOLOGY (IMMUNOLOGY AND BIOLOGIC THERAPY).—Edward Records, University of Nevada, Reno, Nev. (1947).

BIOCHEMISTRY AND ANIMAL NUTRITION.—George H. Hart, Division of Animal Husbandry, University Farm, Davis, Calif. (1947).

LARGE ANIMAL MEDICINE.—James Farquharson, Division of Veterinary Medicine, Colorado A. & M. College, Ft. Collins, Colo. (1947).

LARGE ANIMAL SURGERY.—W. F. Guard, College of Veterinary Medicine, The Ohio State University, Columbus, Ohio. (1948).

PARASITOLOGY.—E. W. Price, Zoological Division, Bureau of Animal Industry, U. S. Department of Agriculture, Washington 25, D. C. (1948).

PATHOLOGY.—E. T. Hallman, *Chairman*, Division of Veterinary Science, Michigan State College, East Lansing, Mich. (1947).

PHYSIOLOGY AND PHARMACOLOGY.—H. H. Dukes, *Secretary*, New York State Veterinary College, Cornell University, Ithaca, N. Y. (1947).

POULTRY PATHOLOGY.—C. A. Brandly, Department of Veterinary Science, University of Wisconsin, Madison, Wis. (1948).

SMALL ANIMAL MEDICINE.—C. P. Zepp, Sr., 136 West 53rd St., New York, N. Y. (1949).

SMALL ANIMAL SURGERY.—C. F. Schlotthauer, Division of Experimental Medicine, The Mayo Foundation, Rochester, Minn. (1949).

VETERINARY HYGIENE.—Andrew L. MacNabb, Ontario Veterinary College, Guelph, Ont. (1949).

VIRUS DISEASES.—R. A. Kelser, *Vice-Chairman*, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa. (1949).

X-RAY.—M. A. Emmerson, Division of Veterinary Medicine, Iowa State College, Ames, Iowa. (1948).

MEMBER-AT-LARGE.—Hadleigh Marsh, Agricultural Experiment Station, Bozeman, Mont. (1948).

Representatives

ADVISORY BOARD, HORSE AND MULE ASSOCIATION OF AMERICA.—T. A. Sigler, Greencastle, Ind. (annual assignment).

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—Ward Giltner, Public Health, Michigan State College, East Lansing, Mich. (annual assignment).

ARMY MEDICAL LIBRARY, HONORARY CONSULTING BOARD.—J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill.

INTER-ASSOCIATION COUNCIL OF ANIMAL DISEASE AND PRODUCTION.—R. C. Klussendorf, 600 S. Michigan Ave., Chicago 5, Ill.

NATIONAL LIVESTOCK LOSS PREVENTION BOARD.—J. A. Barger, 301 Old Colony Bldg., Des Moines 9, Iowa.

NATIONAL RESEARCH COUNCIL (Division of Biology and Agriculture).—E. P. Johnson, Box 593, Blacksburg, Va.

NATIONAL RESEARCH COUNCIL (Division of Med-

ical Sciences).—W. H. Feldman, The Mayo Foundation, Rochester, Minn.

NATIONAL SOCIETY FOR MEDICAL RESEARCH.—J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill.

UNITED STATES PHARMACOPEIAL CONVENTION, XII.—H. E. Moskey, Food and Drug Administration, Washington 25, D. C. (to serve until 1950).

Program (*Ex-Officio*)*

This committee is composed of the chairmen and secretaries of the six sections with the executive secretary acting as the chairman.

*Pursuant to article XIII, section 1, part 4 of the Administrative By-Laws, as amended at the seventy-eighth annual meeting.

Resident State Secretaries

Alabama.—I. S. McAdory, Alabama Polytechnic Institute, Auburn.

Arizona.—Robert E. McComb, Jr., Rt. 5, Box 514, Phoenix.

Arkansas.—Hubert T. Shull, Jr., Texarkana.

California.—G. W. Closson, 835 S. San Gabriel Blvd., San Gabriel.

Colorado.—W. G. Blake, 1225 14th Ave., Greeley.

Connecticut.—Edwin Laitinen, 993 W. Main St., West Hartford.

Delaware.—C. C. Palmer, Wolf Hall, University of Delaware, Newark.

District of Columbia.—Lawrence O. Mott, Animal Disease Station, Department of Agriculture, Beltsville, Md.

Florida.—D. A. Sanders, Agriculture Experiment Station, University of Florida, Gainesville.

Georgia.—B. E. Carlisle, Camilla.

Idaho.—A. P. Schneider, 108 Capitol Bldg., Boise.

Illinois.—W. D. Daugherty, 1306 E. 5th St., Sterling.

Indiana.—Frank R. Booth, Rt. 5, E. Jackson Blvd., Elkhart.

Iowa.—J. H. Krichel, 1914 Main St., Keokuk.

Kansas.—E. E. Leasure, Division of Veterinary Medicine, Kansas State College, Manhattan.

Kentucky.—Allen S. Barnes, 602 Briarcliff, Frankfort.

Louisiana.—C. M. Heflin, Box 1933, Baton Rouge.

Maine.—L. B. Denton, 59 River St., Dover-Foxcroft.

Maryland.—A. L. Brueckner, 4111 Colesville Rd., Hyattsville.

Massachusetts.—L. A. Paquin, Webster.

Michigan.—Frank Thorp, Jr., Anatomy Bldg., East Lansing.

Minnesota.—W. L. Boyd, University Farm, St. Paul 8.

Mississippi.—Wm. L. Gates, P. O. Box 417, Clarksdale.

Missouri.—L. G. Dunlap, 800 Woodswether Rd., Kansas City.

Montana.—A. M. Jasmin, Veterinary Research Laboratory, Bozeman.
Nebraska.—Paul Mathews, 4901 South 33rd St., Omaha.
Nevada.—Edward Records, University of Nevada, Reno.
New Hampshire.—Carl L. Martin, 85 Charles St., Rochester.
New Jersey.—J. R. Porteus, P. O. Box 938, Trenton 5.
New Mexico.—S. W. Wiest, P. O. Box 75, Santa Fe.
New York.—John J. Regan, 1231 Gray Ave., Utica.
North Carolina.—M. M. Leonard, 123 Biltmore Ave., Asheville.
North Dakota.—T. O. Brandenburg, Livestock Sanitary Board, State House, Bismarck.
Ohio.—Paul A. Soldner, Veterinary Clinic, The Ohio State University, Columbus 10.
Oklahoma.—O. E. Robinson, Bixby.
Oregon.—E. M. Dickinson, Dept. of Veterinary Medicine, Oregon State College, Corvallis.
Pennsylvania.—Samuel Abramson, 3400 N. 23rd St., Philadelphia 40.
Rhode Island.—J. S. Barber, 560 Pleasant St., Pawtucket.
South Carolina.—E. P. Caughman, Jr., 900 Harden St., Columbia 5.
South Dakota.—R. M. Scott, 1501 S. Main Ave., Sioux Falls.
Tennessee.—Dennis Coughlin, 1713 Yale Ave., Knoxville 16.
Texas.—Leon G. Cloud, 2833 W. 7th St., Ft. Worth.
Utah.—G. H. Ehlers, 212 Livestock Exchange Bldg., Ogden.
Vermont.—Guy N. Welch, 43 Union St., Northfield.
Virginia.—Taylor P. Rowe, 3320 W. Broad St., Richmond.
Washington.—M. O. Barnes, 203 Federal Bldg., Olympia.
West Virginia.—S. E. Hershey, 117 Court St., Charleston 1.
Wisconsin.—J. S. Healy, 330 Federal Bldg., Madison.
Wyoming.—A. M. Lee, University of Wyoming, Laramie.

Resident Territorial Secretaries

Alaska.—Earl F. Graves, P. O. Box H, Palmer.
Canal Zone.—Paul H. Dowell, Box 2926, Cristobal, C. Z.
Hawaii.—Paul T. Nomura, 767 Ala Moana, Honolulu.
Puerto Rico.—O. A. Lopez-Pacheco, P. O. Box 155, Hato Rey.

Resident Provincial Secretaries

Alberta.—J. C. Wainright, 26 Central Bldg., Calgary.
British Columbia.—J. G. Jervis, Milner.

Manitoba.—R. H. Lay, 613 Dominion Public Bldg., Winnipeg.
New Brunswick.—J. T. Aikens, Fredericton.
Nova Scotia.—E. E. I. Hancock, 79 Exhibition St., Truro.
Ontario.—W. Moynihan, 366 Keele St., Toronto.
Prince Edward Island.—E. S. Notting, Box 489, Charlottetown.
Quebec.—Joseph Dufresne, Oka, Province of Quebec.
Saskatchewan.—Norman Wright, University of Saskatchewan, Saskatoon.

Foreign Corresponding Secretaries

Antigua.—Dr. L. R. Hutson, Antigua, B.W.I.
Argentina.—Willy Rucks, Valle 1314, Buenos Aires.
Australia.—Mr. Grahame Edgar, B.V.Sc., Government Veterinary Research Station, Glenfield, N.S.W.
Bermuda.—J. W. Sutherland, Fairlylands, Pembroke West.
Brazil.—A. V. Machado, Caixa Postal 567, Belo Horizonte, Estado de Minas.
Chile.—Julio San Miguel, Casilla 537, Santiago.
China.—Ching Sheng Lo, c/o BAI, Ministry of Agriculture & Forestry, Chungking.
Colombia.—C. A. Rojas, Calle 25, No. 13-75, Bogota.
Cuba.—R. Lagarde, Calle 23, No. 802, Vedado, Havana.
Dutch Guiana.—J. Frickers, Groote Hofstraat 7-v, Paramaribo.
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Ireland.—Wm. Kearney, Veterinary College, Ballsbridge, Dublin, S. E. 4.
England.—G. S. Muir, Eden House, Bury Rd., Stowmarket, Suffolk.
Iceland.—Prof. N. Dungal, University of Reykjavik, Reykjavik.
India.—
Mexico.—Luis Santa Maria, Apartado Postal No. 2067, Mexico City, D. F.
New Zealand.—D. J. Smith, c/o Morrinsville Veterinary Association, Morrinsville.
Peru.—Daniel A. Tovar, Apartado 160, Huanuco.
Scotland.—Robert D. MacKintosh, Denver, Insch, Aberdeenshire.
St. Kitts.—Victor A. Hall, Basseterre, B.W.I.
Sweden.—Gustav Denalius, Linkoping.
Switzerland.—W. Frei, Zurich.
Trinidad.—Dr. H. V. M. Metivier, Dept. of Agriculture, Port of Spain, B.W.I.
Union of South Africa.—G. Martinaglia, Box 1620, Johannesburg, Transvaal.
Uruguay.—Guillermo P. Lockhart, Presidente Berro 2730, Montevideo.
Venezuela.—Claudio E. Muskus, P. O. Box 993, Caracas.

COMMITTEE REPORTS

Adopted at the Eighty-third Annual Meeting

of the

American Veterinary Medical Association

Boston, August 18-22, 1946

Standing Committees

Council on Education

The change from the Committee on Education to the Council on Education was officially authorized at the business session of the American Veterinary Medical Association, August, 1945. The Council on Education could not function until the three members that constitute the Executive Committee of the Council had been duly nominated and appointed by the Executive Board of the American Veterinary Medical Association. These appointments were made at the December meeting. The six other appointments were made by President Farquharson following this meeting.

During the winter and spring months, the colleges of veterinary medicine of four institutions were inspected, namely: Iowa State College, Michigan State College, University of Pennsylvania, and Alabama Polytechnic Institute. Approximately two days were required for the inspection of each college. Two inspection reports of the former Committee on Education were accepted by the Council, namely: Washington State College and Texas A. & M. College. Of these six colleges, four were fully approved and two were conditionally approved.

A meeting of the Council was held in Chicago May 10, 1946, at which all members were present. The day was devoted to discussion of problems relating to veterinary education. Certain definite policies were formulated regarding the present status of the veterinary institutions and undergraduate study and training. The minimum requirements for an approved veterinary school were thoroughly examined and certain changes were recommended that will raise the present educational standards.

The purpose of the Council on Education is to help, and lend every possible means of assistance, to strengthen the existing veterinary colleges. The members are aware of the difficulties that confront the administrative authorities in holding and finding competent and efficient faculties. This is the result of war depletions and the desire of faculty members to enter more remunerative fields of veterinary endeavor during this flush period. The present veterinary colleges can expect raids to be made on key members of their faculties by universities that are starting colleges of veterinary medicine. The Council is also cognizant of the tremendous pressure that is being exerted and the temptation to increase student enrollment. Nevertheless, the Council cannot generally support such a program, as most colleges today are taking more students

than can be properly trained in clinical courses. It would, therefore, mean a lowering of educational standards which cannot be condoned.

The inspection of colleges reveals that most of them offer much stronger and more satisfactory courses in the preclinical than in the clinical subjects. It is recognized that there is not a veterinary college without a weakness in one department or another. Some are generally strong, others generally weak. The prevailing weakness is in clinical courses. The physical plant is fair to good in most colleges, but some are woefully lacking in one or more of the following respects: (1) amount of clinical material, both hospital and outclinic, (2) number of qualified and experienced clinical staff members, (3) methods of presentation and teaching of clinic, (4) utilization of basic sciences and their coördination with clinical veterinary medicine. These inadequacies reflect on the ability of the graduate to meet the problems in practice.

The weaknesses have been called to the attention of the administrative authorities in the way of constructive criticism. All schools will be given a reasonable time to make adjustments and meet the minimum requirements. This will be checked by the Council. However, if no effort is made to correct these deficiencies then more positive action will be taken and reported to the Executive Board and the membership of the Association.

The Council recommends that the following colleges be accredited by this association for the coming year, subject to reinspection and review, and their graduates be eligible for membership in this association:

- 1) Alabama Polytechnic Institute, Division of Veterinary Medicine.
- 2) Colorado Agricultural and Mechanical College, Division of Veterinary Medicine.
- 3) École de Médecine Vétérinaire de la Province de Québec, Université de Montréal.
- 4) Iowa State College, Division of Veterinary Medicine.
- 5) Kansas State College, School of Veterinary Medicine.
- 6) Michigan State College, School of Veterinary Medicine.
- 7) New York State Veterinary College, Cornell University.
- 8) The Ohio State University, College of Veterinary Medicine.
- 9) Ontario Veterinary College, University of Toronto.

- 10) University of Pennsylvania, School of Veterinary Medicine.
- 11) Texas Agricultural and Mechanical College, School of Veterinary Medicine.
- 12) State College of Washington, College of Veterinary Medicine.

s/JAMES FARQUHARSON, Secretary

W. L. BOYD, Chairman	W. A. HAGAN
W. A. AITKEN	S. W. HAIGLER
SETH C. DILDINE	C. C. HASTINGS
GARTH A. EDGE	M. S. SHAHAN

Legislation

The principal items of legislation significant to veterinary science which have been introduced in Congress during the past year are the bills relating to a National Science Foundation. The purpose of these was to implement some of the recommendations of the Vannevar Bush report with respect to providing federal aid for scientific research. World War II emphasized, as nothing else could, the essentiality of science and research to the nation's welfare and even its existence.

The bills to create a National Science Foundation have been through several stages of hearings, revision and compromise, and a joint sub-committee called about 100 witnesses and printed 1000 pages of testimony. Dr. H. H. Duke appeared for the American Veterinary Medical Association and submitted a prepared statement which was published as part of the record of the hearings.

In general, all fields of science were in favor of and actively supported the idea of a National Science Foundation. Fundamental division of opinion developed and still exists upon the far-reaching character of the proposed legislation as it would concern political control over science, over the form of administrative structure as between a directing board or a single appointive head, over the way in which federal money would be distributed, and over the effect of such distribution on science itself.

It has been the policy of this association, after full consideration of all phases of the National Science Foundation proposal, to support the measure. Several times during the year, letters or telegrams have been sent to key members of Congress at the request of those who have been watching the progress of the legislation. In addition, one member of the committee (Congressman Gillie) and President-Elect Simms have kept in touch with developments and have endeavored to insure the inclusion of veterinary medical research in the broad field of medical research that will be covered if the act eventually is passed.

The crowded calendar of Congress for the past year resulted in no final action to establish the National Science Foundation, but it is presumed that identical or similar legislation will be introduced in the next session.

Another bill of concern to animal disease control was HR 7101, to provide more effective control over garbage disposal from ships, which is a hazard with respect to possible introduction of foot-and-mouth disease and perhaps other foreign plagues of livestock. The Senate Agriculture Committee approved the bill on July 31. Several telegrams were sent to key senators urging support for the bill and all of them responded favorably, but the bill died on the Senate calendar when Congress adjourned.

The duty of this committee, as provided in the Administrative By-Laws, is "to watch for subversive legislation in national, state and municipal legislative bodies that is detrimental to the progress of veterinary medicine and to enlighten such bodies

on the enactment of constructive measures of interest to veterinary science and the production of domestic animals." This is a large, though commendable, order to carry out. Your chairman has not yet developed a system with enough seeing eyes and listening ears all over the country to carry out, by any means, the work implied in the by-law. However, the Association is fortunate in that one committee member, whose interest and aid has been of tremendous help, is in Congress, and in having officers and members in Washington whose contacts and efforts have also been valuable and have kept us reasonably well informed on important developments affecting the veterinary profession and its service to the country. In general, therefore, it is believed that one purpose of the committee's work has been reasonably well attained.

J. G. HARDENBERGH, *Chairman*
C. C. FRANKS
E. M. GILDOW

GEORGE W. GILLIE
N. J. MILLER

(The resolutions adopted at the Boston Session will be published in the December issue of the JOURNAL.)

Biological Products

The Committee considered several new products but felt that further field evidence and research should be recorded before their acceptance. The following list of biological products is submitted as being acceptable.

ANTITOXINS

Antivenin.
Botulinus antitoxin (type A, type B, type C, types A & B, types A, B, & C).
Tetanus antitoxin.

SERUMS

Antianthrax serum.
Antiblackleg serum.
Antibronchisepticus-bacillus serum.
Anticanine-distemper serum.
Antiencephalomyelitis serum (eastern).
Antiencephalomyelitis serum (western).
Antiencephalomyelitis serum (eastern and western).
Antifeline-distemper serum.
Antihog-cholera serum.
Antistreptococcus serum.
Gonadin serum.
Normal serum.
Antiswine-erysipelas serum.
Antihemorrhagic-septicemia serum.

AGGRESSINS

Blackleg cultural aggressin.
Blackleg natural aggressin.

DIAGNOSTIC AGENTS

Avian tuberculin.
Mallein.
Tuberculin.

TOXOIDS

Staphylococcus aureus toxoid.
Tetanus toxoid.

VACCINES AND VIRUSES

Anthrax-spore vaccine.
Brucella abortus vaccine.
Canine-distemper vaccine.
Canine-distemper virus.
Encephalomyelitis vaccine (eastern).
Encephalomyelitis vaccine (western).
Encephalomyelitis vaccine (eastern and western).

Erysipelothrix rhusiopathiae vaccine.
Fowl-pox vaccine.
Pigeon-pox vaccine.
Hog-cholera virus.
Ovine-ecthyma vaccine.
Rabies vaccine.
Fowl-laryngotracheitis vaccine.
Feline-distemper vaccine.

BACTERINS

Autogenous bacterin.
Blackleg bacterin.
Clostridium chauvel-septicum bacterin.
Clostridium hemolyticum bacterin.
Clostridium novyi bacterin.

S/ H. E. BIESTER, Chairman
W. S. GOCHENOUR D. I. SKIDMORE
G. H. GOOD F. H. SUITS

Public Relations

Because of certain conditions imposed by the war, people have become highly conscious of the importance of food and clothing. History has recorded previous occurrences of famine in certain countries, but today hunger and poverty are widespread throughout the war-torn countries of Europe and Asia. Millions of people in these countries are merely subsisting, and many will die of conditions directly attributable to under-nourishment. Since agriculture and the livestock industry are the chief sources of the materials used in the preparation and manufacture of food and clothing, public attention is focused on these industries and increased interest is shown in their welfare. Various factors, of course, can affect the welfare of agriculture and the livestock industry, but diseases of animals will always be an important factor in livestock production. Because they alone, if not adequately controlled, can limit or inhibit the raising of livestock. This has received rather widespread attention. Organized veterinary medicine has established an enviable reputation in controlling these diseases and this would be an opportune time to develop better veterinary public relations. Indeed, the future of veterinary medicine depends much on how well it utilizes its opportunities.

Veterinary medicine has and still is receiving rather widespread attention. We have noted a definite trend in the farm press to give the veterinary profession full credit for its accomplishments, and it is utilizing to a greater extent articles written by veterinarians. Credit for this probably is due largely to the co-operative public relations activities of the American Veterinary Medical Association, various state and district veterinary societies, the Associated Serum Producers, Inc., and other organizations interested in the welfare of veterinary medicine.

The importance of veterinary medicine is now also being recognized by the general press. The December 11, 1945, edition of *Look Magazine* featured Dr. T. H. Ferguson of Lake Geneva, in an article entitled "Animal Doctor." It showed him performing various professional services on farms and in his hospital. The author of this article, in commenting on veterinarians, referred to them as the "hard-working" men in white of the farm lands. He stated "the veterinarian plays a stellar rôle in food-producing areas where disease, sweeping through a livestock herd, might spell catastrophe for a farmer and mean more empty stomachs for a hungry world."

The January 27, 1946, *Minneapolis Sunday Tribune* in its pictorial section featured Drs. E. H. Gloss of Gaylord, Minn., and E. J. Kading of Gibbon, Minn., performing various profes-

sional services and was similar to the article that appeared in *Look*. Both of these articles, because of the wide distribution of the magazine and newspaper and the varied audiences which read them, undoubtedly did much to acquaint people living in cities with the importance of veterinary medicine and its relationship to public welfare.

A series of illustrated messages entitled "Pulling Together," prepared by Wilson and Company, were published in 12 midwestern agricultural publications. They featured the veterinarian as one of the important contributors to human welfare.

A program designed "to show the public the advantages of modern veterinary service" was sponsored by the Associated Serum Producers, Inc. They budgeted upward of \$90,000 in 1946 to carry to the public the message of disease prevention and better support of organized veterinary medicine. Their messages were presented to the public through 22 magazines and farm journals, 1,218 daily newspapers, 2,283 weekly newspapers, and 690 radio stations. They covered a wide variety of subjects and reached from coast to coast. Such programs undoubtedly do much to acquaint the public with the benefits of veterinary service.

The splendid record of service of veterinarians serving with the armed forces and government agencies in this country and abroad have done much to develop better veterinary public relations.

The American Veterinary Medical Association, with Mr. Fairall's able assistance, has continued to carry on its extensive public relations program. The following is a list of subjects presented during the past year:

SUBJECTS OF RADIO RELEASES DURING THE PAST YEAR

Use care in dosing pregnant ewes	Brood sow rations
Proving value of rabies vaccine	Danger in hormones
Preparing for spring pigs	Interstate livestock health problems
Caution on soybean hay feeding	Barn itch
Calfhood vaccination regulations	Hot-house pigs
Progress against encephalomyelitis	Penicillin limitations
Swine tuberculosis increasing	Lame livestock
Pig staggers and vitamins	U. S. veterinarians aid China
Paint poisoning of cattle	Vitamin saturation of dairy cows
Protein shortage problems	Ergot poisoning
Danger in lay vaccination	"Bull nose"
Pullorum precautions	Catarrhal fever
Swine brucellosis	Cattle breeding problems
Foot-and-mouth disease	Erysipeloid dangers
Sheep scab	Sulfa drugs and coccidiosis
Raise chicks, hogs separately	"Hardware" heart
Feeding dry cows	Thallium poisoning
Cornstalk disease	DDT vs. ticks
Iodine and milk output	Painless dehorning
Vaccination curbs hog cholera	Big head of horses
Brucellosis and human health	Alfalfa in dairy rations
60-year progress against livestock diseases	"Sway-back" and copper deficiency
	Sleeping sickness losses
	Swine suffocation
	Cattle grub control
	Equine eye problems
	Rickets
	Vitamin A and poultry
	Phenothiazine dangers
	Anaplasmosis

Faulty chicken vaccination
Vitamins in milk
Egg infertility
\$100,000 veterinary research fund
Blackleg
Mange
Tapeworm control
Mastitis
Fly control
Internal parasites of sheep
Grasshoppers injure turkeys

Foxes spread rabies
Anthrax
Foot rot
Incorrect milking methods
Coccidiosis
Turkey pullorum
Fleas
Swine brucellosis
Vitamin shortages in drylot
People give tuberculosis to cows

Water for livestock
Care of horses' teeth
Baby pig disease
General nutritional problems
Foot-and-mouth disease
Common poultry losses

Sheep parasites
Keeping horses healthy
Shipping fever
Rabies
Encephalomyelitis

These subjects were presented to the public as news releases and radio broadcasts. Mr. Fairall mentioned that the AVMA is at present operating on a public relations budget that is much more limited than those of other national organizations but that even with this small budget it has carried on a rather well-rounded program which has been continuous throughout the year. It covered newspapers, farm journals, radio stations, news bureaus, and extension department news letters from coast to coast. Since the end of the war, there has been a definite upturn in the volume of AVMA news releases being handled by the news bureaus and newspapers. The clippings from these news releases coming in from all parts of the country have increased considerably since last fall, and they always mention the American Veterinary Medical Association. It appears that our program is definitely gaining momentum. Your committee feels that it is worthwhile and should be continued. This program could be improved by greater participation and co-operation of the state associations.

s/C. F. SCHLÖTTHAUER, Chairman

CLIFTON D. LOWE E. C. SCHUBEL
A. H. QUIN, JR. CASSIUS WAY

Poultry

PERTINENT EVENTS OF THE YEAR

It is reported that an unusual percentage of poor quality chicks was hatched. This may have been the result of poor quality of feed used in hatchery flocks.

An unusual number of deficiency diseases in growing chicks has been reported from several sections of the country, the result of shortage of protein concentrates and poor quality of some of the grains. Veterinarians should be on the lookout for deficiency diseases during the fall and winter, especially in the Middle West.

Better grains may be available from this year's crop, but protein feeds will be scarce for the remainder of the year.

Full range feeding program for growing chicks is on the increase due to the acute shortage of starting and growing rations.

Michigan reports one case of erysipelothrix infection in turkeys and its first case of hexamita infection. Severe outbreaks of fowl cholera, pullorum disease, coccidiosis, and paratyphoid were prevalent.

Sodium chloride, sodium bicarbonate, and probably other sodium compounds have been shown experimentally to produce edema and ascites (waterbelly) in turkey poult.*

NEWCASTLE DISEASE

Your 1944 committee pointed out for the first time the existence of Newcastle disease in this country. The recognition of the identity of so-called pneumoencephalitis of chickens and turkeys in California with Newcastle disease revealed a new and serious threat to our

*L. H. Scrivner: J.A.V.M.A., Jan., 1946.

SUBJECTS OF RADIO PROGRAMS— FURNISHED COOPERATING STATE ASSOCIATIONS

Adult brucellosis vaccination
Feeding the dry cow
Laryngotracheitis of poultry
Dr. Buck and calf-hood vaccination
Swine tuberculosis
Pig anemia
Nutritional deficiencies of calves
Teat injury
Newcastle disease
Calf diphtheria

Foul foot
Cattle grub control
Anthrax
Milk fever
Sanitation
Brucellosis
Mastitis
Sheep disease
Swine erysipelas
Hog cholera
Saving barnyard babies
Swine intestinal diseases

poultry industry. In 1945 the disease was found in New Jersey and New York and soon thereafter in a number of other states. By late April, 1946, when a national conference was called by the U. S. Department of Agriculture in Washington to formulate an effective control program, the infection had been identified by isolation of the virus in the following states: California, New Jersey, New York, Connecticut, Massachusetts, Rhode Island, and Delaware—as determined by serological or immunological methods in the states of Maryland, Pennsylvania, Washington, Texas, and Illinois; its probable presence as determined by clinical

the Committee has prepared the following outline which can be made available for immediate distribution:

Diagnostic Procedures for Newcastle Disease

A. By Isolation of the Virus.

- 1) Select live birds showing initial symptoms (respiratory distress).
- 2) Collect portions of spleen and brain aseptically and prepare approximately a 1 to 5 dilution in broth.

Test for sterility.

Keep frozen, if not processed immediately. Inject up to 0.1 cc. of the supernatant

Hatchery Supply Flock Participation in the National Poultry Improvement Plan by Pullorum Classes, 1939-40 to 1944-45

	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45
Average % Reactors	3.10	2.87	2.64	2.40	2.26	2.00
No. of Birds Qualified.....	10,714,238	12,010,766	15,518,967	16,534,458	20,332,048	18,592,302
U. S. Pullorum—						
Tested: No. of Birds.....	6,522,647	7,878,480	8,596,461	6,758,383	8,556,094	5,960,186
U. S. Pullorum—						
Controlled: No. of Birds....	.....	.....	3,090,932	5,531,120	7,913,049	7,902,599
U. S. Pullorum—						
Passed: No. of Birds.....	1,033,088	1,121,180	909,040	1,021,776	1,179,482	1,372,284
U. S. Pullorum—						
Clean: No. of Birds.....	1,435,134	1,528,286	2,310,216	2,588,732	2,683,423	3,357,233

and post mortem observations in other states including Michigan, Oklahoma, Utah, Nevada and, perhaps Iowa.

Newcastle infection in this country has shown all of the manifestations previously recorded for the disease in other parts of the world, with the exception that the mortality has been relatively light. Nevertheless, the high diffusibility and morbidity of the infection, and its effect on egg production and impaired development, mark the disease as a serious menace to a profitable poultry industry. That the disease has a potentiality for high mortality is shown by reports of death losses of over 80 per cent in flocks of pullets as well as young chicks.

Since the disease is now widely distributed in this country, and eradication by quarantine and slaughter does not now seem practicable to regulatory officials, it may be anticipated that Newcastle disease will constitute a continuous and serious disease problem. Hence, practical control measures must be based on the following facts:

1) The virus is eliminated from the body of sick, convalescent, and carrier birds. Started chicks and breeding cockerels are a serious menace in this respect. Recently, the spread of the infection by day-old chicks distributed from hatcheries has been reported.

2) The virus persists for long periods in the carcasses of diseased birds, chicken embryos, and on contaminated materials and equipment. This is an unusually resistant virus.

3) The infectious agent (virus) may be eliminated from contaminated establishments by thorough cleaning, including the use of lye solutions, followed by an approved cresylic acid disinfectant in recommended concentration.

At a special meeting of the National Assembly of Chief Livestock Sanitary Officials held Dec. 3, 1945, it was suggested that the Committee on Miscellaneous Transmissible Diseases of Poultry prepare an outline of diagnostic procedures for Newcastle disease. The principles of diagnostic procedure have been dealt with in the respective papers presented by Dr. J. R. Beach and Dr. F. R. Beaudette before this association.

In order to make concise directions available,

fluid into the allantoic sac of not fewer than five 8- to 12-day embryonated chicken eggs. Reincubate eggs and candle daily for next six days. Remove dead embryos for examination and sterility test. Harvest allantoic fluid and embryonic tissue for further passages and specific serum neutralization tests.

B. Identification of suspected virus obtained by above technique.

1) Titrate suspected agent in eggs. Use three eggs for each of the following dilutions: 1:100, 1:10,000, 1:1,000,000. Reincubate eggs as in paragraph 2.

2) Recover virus from embryos dying on second or subsequent days. This virus may be sent to the United States Bureau of Animal Industry or typed with specific serum received from the Bureau.

3) For neutralization test, titrate suspected agent as outlined in paragraph 1 in 1:100, 1:10,000, 1:1,000,000, but add equal parts of Newcastle-immune serum and inoculate embryonated eggs. Consider the test positive if mortality is prevented in the two highest dilutions.

C. Identification of Newcastle disease by neutralization tests on chicken serums is permissible only in known infected states.

1) The procedure is the same as in B-3, except that known Newcastle virus and suspected chicken serum are used. Blood samples must be obtained under aseptic conditions, allowed to coagulate, and serum removed. The test is considered positive if it neutralizes at least 1,000 minimum embryo lethal doses.

In areas where evidence of the disease has appeared for the first time, the diagnosis should be based solely on the isolation of the virus.

PULLORUM DISEASE

(The following information was submitted for the use of this committee by Dr. Paul B. Zumbro, senior poultry coordinator, Production and Marketing Administration, Washington, D. C.)

National Poultry Improvement Plan. — All states, except Nevada, are now coöperating in the plan. A similar plan, applicable to turkeys

Hatchery Participation in the National Poultry Improvement Plan by Pullorum Classes, 1939-40 to 1945-46

No. of States Cooperating in N.P.I.P.	1939-40	1940-41	1941-42	1942-43	*1943-44	1944-45	1945-46
Hatcheries:							
Number	44	44	44	44	45	45	47
Egg Capacity	2,192	2,465	2,667	2,729	3,086	3,181	3,951
U. S. Pullorum—Tested:	90,578,718	117,915,752	135,742,173	149,426,834	189,756,009	206,259,311	259,224,693
Number	1,157	1,342	1,435	1,401	1,553	1,360	1,252
Egg Capacity	55,394,872	80,289,299	95,831,500	100,171,297	123,752,805	118,528,373	107,712,209
U. S. Pullorum—Controlled:							
Number	.....	.....	264	448	782	971	1,505
Egg Capacity	.....	.....	13,025,532	24,632,412	45,899,483	58,573,200	105,156,400
U. S. Pullorum—Passed:							
Number	149	158	121	116	106	180	374
Egg Capacity	4,454,825	5,379,909	4,468,358	3,499,971	3,557,007	8,649,496	10,591,590
U. S. Pullorum—Clean:							
Number	486	549	616	585	640	670	820
Egg Capacity	6,638,709	9,048,386	12,241,413	11,399,448	16,546,714	20,507,636	26,684,494

*First year all participants required to participate in pullorum phases.

and designated as the National Turkey Improvement Plan, became operative Sept. 25, 1943, and 36 of the 48 states are now co-operating in that plan.

The number of chickens tested for pullorum disease increased from 4,329,364 in 1935-36 to 21,098,026 in 1944-45. The average per cent of reactors on the first test has been reduced to 2.0. In 1940-41, the maximum tolerance in the U. S. pullorum tested class was "fewer than 10 per cent reactors." This has been reduced 1 per cent each year until this year the maximum tolerance was "fewer than 5 per cent reactors."

We are enclosing two tables, one showing the number and egg capacity of participating hatcheries by pullorum classes during each of the past seven years, and the other showing the number of birds in participating hatchery supply flocks by pullorum classes for the past six years. The data on birds for the 1945-46 season are not yet available.

There has been a consistent increase in the number and egg capacity of participating hatcheries, and each year some of these hatcheries have qualified for a higher pullorum classification. The U. S. pullorum-controlled class was first made available in 1941-42, and the number of hatcheries qualifying for that class has increased from 264 that year to 1,505 this year. The number and egg capacity of the U. S. pullorum-passed hatcheries more than doubled this past year, a noteworthy advance.

Agricultural Statistics, 1945, contains a table (No. 520) entitled "Chickens and Turkeys Officially Tested for Pullorum Disease, Number and Percentage of Reactors, 1920-44." The data were compiled in this office from reports of each state having an official pullorum-testing program. The table shows that in the year 1944-45, 1,839,143 turkeys were officially tested for pullorum disease with an average of 1.86 per cent reactors on the first test.

The Committee recommends:

1) Practitioners should be encouraged to contribute articles on poultry diseases to the industry and veterinary journals.

2) Our veterinary colleges should adopt a more uniform and extensive instruction on poultry disease control, pathology, management, and breeding.

3) The practicing veterinarian should seek more uniform and extensive instructions on poultry husbandry, especially problems of the hatcheries, in order to more adequately serve that industry.

4) Every educator in the field of poultry should use the facilities of visual education in presenting poultry problems to students, veterinarians, and research workers.

5) Extension schools for studying poultry problems and diseases should be more widely available to the practitioners, and it is urged that veterinarians attend such schools.

6) It is urged that a discussion or paper on poultry problems or diseases appear on every veterinary program.

7) Practicing veterinarians should take full advantage of the facilities of the diagnostic laboratories in handling the problems of the poultry industry.

8) Research workers, diagnosticians, and veterinary practitioners should be on the lookout for Newcastle disease.

9) Practitioners should acquaint themselves with the All Pullet Flock Program and recommend the isolation of young and growing birds from the laying flock.

S/P. V. NEUZIL, Chairman
F. R. BEAUDETTE W. R. HINSHAW
JOHN P. DELAPLANE FRANK THORP, JR.

Nutrition

Material appearing in the Nutrition Section of the JOURNAL of the American Veterinary Medical Association has been most ably provided by the JOURNAL staff. Committee members can aid by submitting results of research in nutrition whenever such material is available. More practitioners should be encouraged to submit case reports for publication in this section.

It is gratifying to note that some veterinary schools have included an additional course in animal nutrition. It is recommended that other schools do so. Veterinarians should be as well trained in animal nutrition as the animal husbandry graduate. Many veterinary associations are having competent nutrition specialists on their programs.

THE FEED SITUATION

The feed situation is presently worse than at any time during the war. There is little chance for improvement until foreign countries are again producing much more feed and food. Veterinarians are justified in advising their clients to (1) feed only efficient animals, (2) eliminate from their flocks and herds the inefficient units, and (3) maintain only the number of animal units they are equipped to care for.

PROBLEMS AND PROGRESS IN NUTRITION

Swine.—Scarcity of protein supplements of animal origin has necessitated feeding an all vegetable ration in many herds. Such herds may show a calcium and/or a phosphorus deficiency. The so-called baby pig disease or three-day pig disease is probably of nutritional origin. It has been more prevalent in recent years.

Horses.—The nutrition of horses for play purposes may be in need of greater supervision by veterinarians, than of horses used for utility purposes. Owners and trainers of race horses may go to extremes in ideas and costs to provide a feed supply for these animals. Pleasure riding horses are often owned by inexperienced persons and feed is likely to be given little attention. The relation of riboflavin to periodic ophthalmia as reported by the Army Veterinary Research Laboratory at Front Royal, Virginia, is the most interesting finding of the year in horse nutrition.

Dairy Cattle.—Veterinarians in many sections have reported an increase in the number of "down cows." These cases may respond temporarily to parenteral solutions of calcium alone or calcium solutions fortified with phosphorus and/or magnesium. Repeated administrations fail to benefit some cases. More information is needed on this condition.

Fowl.—A survey of nutritional deficiencies in chickens and turkeys in various parts of the country led to the conclusion that there has been but little increase during the past year. In the language of the trade, "The shortages which bothered feed manufacturers were not of those ingredients which are required by poultry to prevent the usual nutritional disorders."

During the past year there has been no shortage of calcium and phosphorous supplements, nor of vitamin D. However, an increase in rickets was noticed by pathologists in at least three states. Hatchability has remained at a high level and considerably above that of two years ago. Any shortage of calcium, phosphorous, and vitamin D would be reflected in lower hatchability.

There has been no shortage of riboflavin reported, but some evidence of an increase in vitamin A deficiency. It appears, therefore, that any reported increase in the deficiency diseases of chickens and turkeys has resulted from local conditions rather than general shortage of nutritive requirements.

It would be well to consider the recommendations of the 1944-45 committee as to its constructive organization.

A. H. GROTH, Chairman
CLIFF D. CARPENTER C. C. HASTINGS
GEO H. HART L. M. LeGARD

Registry of Veterinary Pathology

In the first public announcement of the establishment at the Army Institute of Pathology of a new collection to be known as the Registry of Veterinary Pathology, the purposes of the new registry were stated as follows: "To assemble (a) material representing general pathologic anatomy, including the vitamin deficiencies, specific diseases of different tissues and organs, and examples of natural and experimentally induced neoplasia; (b) a complete collection of prepared slides representing the normal histology of the different species of animals, including domesticated and wild mammals, birds, and cold-blooded vertebrates, and (c) material illustrating experimentally induced lesions of infectious diseases."

Although the Registry of Veterinary Pathology has been in existence for approximately 2 years only, the importance of the collection is being realized by practitioners as well as by research institutions and departments of pathology in the respective veterinary schools. It is the Committee's desire to promote the development of the Registry to the ultimate in usefulness for those whom it is intended to serve.

The collection has had a continuous growth since its inception and on May 1, 1946, the Registry contained a total of 877 accessions. The material represented is most varied. In addition to many infectious diseases, the Registry also contains a large number of animal neoplasms representing several species. In view of the fact that the growth of the Registry to date has been accomplished in the face of many difficulties inherent to the war years, the future prospects for the rapid growth of the collection appear most promising.

The Committee early realized that to best serve the veterinary profession, the Registry should be in a position to supply deficiencies in the teaching collections of the respective veterinary colleges and to provide facilities for graduate training in pathology for those who wish to pursue pathology as a career. Both of these objectives are being actively promoted at the present time and it is hoped that in the next annual report it will be possible to announce the first graduate student to be assigned for training to the Army Institute of Pathology. The need for young men, well trained in tissue pathology, was never more urgent than now. If pathology in relation to an understanding of disease is to occupy its proper place in our teaching institutions, serious thought must be given at once to means whereby young men would be attracted to this field. The Army Institute of Pathology offers opportunities for this training to a degree not found elsewhere. It is exceedingly important that the Registry of Veterinary Pathology have at all times a graduate student assigned for a year's training in this unusually fine institution.

During the past year the Registry of Veterinary Pathology was asked to assist in supplying

material for the teaching of pathology in the School of Veterinary Medicine recently established at Tuskegee Institute. The request was granted and a considerable amount of material was supplied.

It should again be emphasized that the Army Institute of Pathology offers a diagnosis service for practicing veterinarians and others seriously concerned with disease processes. It is only necessary to fix the specimen properly in 10 per cent formalin and mail it to the Registry of Veterinary Pathology, Army Institute of Pathology, Washington, D. C., with a brief statement of the salient features of the case from which the specimen was obtained. This service is rendered without charge. It is desired that veterinarians who encounter specimens representing disease processes that might be of value to the Registry send the specimens to the above address, express collect.

On April 16, 1946, the Committee on Registry of Veterinary Pathology met at the Army Institute of Pathology, Washington, D. C. Colonel Baldwin Lucké, the ex officio member representing the Army Institute of Pathology was unable to attend. Instead, Colonel Raymond Dart, M.C., Deputy Director of the Institute was present. Since Captain C. L. Davis had been separated from the Army, Major T. C. Jones, V.C., now assigned to the Institute of Pathology, agreed to act as secretary for the Committee.

One of the important items of business which was acted upon was the decision to create an advisory committee. The individuals selected will serve to stimulate interest in the Registry, and act as consultants on material submitted and make available their experience of special problems that may arise. A list of seven prominent experimental and tissue pathologists in the veterinary field was agreed upon, and an invitation to serve was sent to each by the chairman.

The Committee agreed that a survey should be made to determine the character of the collections of pathologic materials available in the respective colleges of veterinary medicine and that this information be properly filed in the office of the Registry at the Army Institute of Pathology. It was also deemed advisable to inquire of the departments of pathology in the respective veterinary schools concerning the deficiencies existing in their teaching collections so that the needed material might be supplied through the Registry of Veterinary Pathology. This survey has been undertaken. The Registry has recently received a valuable collection of tissues representing tuberculous mastitis in cattle. This material which is rarely encountered in America was supplied through the kindness of Dr. John T. Stamp, Royal (Dick) Veterinary College, Edinburgh, Scotland. Teaching collections of 50 slides each of this material are being prepared and within a very short time all of our teaching institutions will be supplied with the material free of charge. It is hoped to eventually fill in other deficiencies in the teaching collections by similar sets of slides representing morbid conditions that are seldom seen or are difficult to obtain.

The Committee felt that during the coming year every effort should be made to obtain material representing the normal histology of as many species of animals as possible. Material of this sort is seldom available in any of the research or teaching institutions and such a collection at the Army Institute of Pathology, when available in loan sets, would be invaluable for investigators and graduate students.

Considerable progress can be reported on the development of plans for a new Army Institute of Pathology at Washington. The new building, as contemplated, will provide facilities

for teaching and research and will be sufficiently large to accommodate the various registries of pathology. The plans are coming along satisfactorily and there is good reason to believe that within a relatively short time construction will be started.

The Committee recommends that the sum of \$1,000 be appropriated by the AVMA in support of the Registry for the ensuing year. This is the amount that was provided last year and is a rather nominal sum in view of the actual expense incurred in maintaining the collection and providing for its future growth and usefulness. In addition, the Committee requests the appropriation of \$50.00 for secretarial assistance during the ensuing year.

The Committee reports with much regret the retirement of Dr. C. L. Davis from the membership of the Committee. Dr. Davis contributed immeasurably to the establishment and growth of the collection while he was stationed in Washington during the past three years. His continuous enthusiasm and insatiable curiosity were prime factors in the development of the Registry, and the other members of the Committee extend to him a vote of appreciation for his meritorious services.

Dr. Baldwin Lucké, who was until recently deputy Director of the Army Institute of Pathology and ex officio member of our committee, has been separated from the Army and has returned to his former position at the medical school of the University of Pennsylvania. The Committee wishes to express to Dr. Lucké its warmest appreciation for his very considerable contribution to the development of the Registry of Veterinary Pathology. From the time the Registry was established, Dr. Lucké gave unselfishly of his time and talents in furthering the project. His great interest in comparative pathology, his scholarship and scientific attributes and his comprehensive understanding of the importance of pathology in the advancement of medical sciences were of valuable assistance.

The Chairman requests that Major T. G. Jones, who is now stationed at the Army Institute of Pathology, be appointed a member of the Committee on Registry of Veterinary Pathology succeeding Dr. Davis. It is also requested that Colonel J. E. Ash be made a member of the Committee ex officio.

WILLIAM H. FELDMAN, Chairman
HARRY W. SCHOENING

Special Committees

Committee on History

The Committee has decided to direct its efforts toward the following projects: (1) biographies of the deans of veterinary colleges; (2) biographies of presidents of the AVMA; (3) biographies of chiefs of the Army Veterinary Corps; (4) biographies of chiefs of the Bureau of Animal Industry; and (5) history of the participation of the veterinary profession in World War II.

Information is being assembled along the several lines indicated, and although no report on work completed is available at this time, such reports will be issued from time to time as projects are completed.

s/ JOSEPH M. ARBURUA, Chairman
W. E. COTTON JOHN R. MOHLER
GEO. H. GLOVER JOHN L. TYLER
L. A. MERILLAT

Rabies

During the past several years, definite information has been obtained through field studies pointing to definite methods applicable in this country for the control of rabies. The Committee considers it very desirable that the whole problem be given careful study by the various groups directly concerned in the control of the disease, and that these groups meet and formulate a satisfactory program which then could be transmitted to the dog-owning public through the various dog associations and to the public at large.

The Committee recommends that a meeting be called of the various groups involved in rabies control, namely, a representative or representatives of the American Medical Association, the American Public Health Association, the U. S. Public Health Service, the U. S. Live Stock Sanitary Association, the U. S. Bureau of Animal Industry, the American Animal Hospital Association and the American Veterinary Medical Association, and that the meeting be arranged by the chairman of the Special Rabies Committee of the AVMA.

The Bureau of Animal Industry has been collecting statistics on the incidence of rabies for a number of years. These statistics are for the calendar year and are not published until some months after the close of the year. While these statistics are of value to show the incidence and importance of the disease as it might appear in the various states, it does not give neighboring states an opportunity to set up protective measures. Therefore, because of the prevalence of rabies in the United States at present, and the importance of stopping its spread by setting up protective barriers (quarantine regulations), the Committee recommends that each state immediately arrange with the states bordering it, to exchange information on the location and incidence of rabies. This would be most useful if it were done on a monthly basis, or oftener if necessary. Thus, states would be alerted of foci of infection outside their borders sufficiently in advance to enable them to take defensive measures if they wish. Such an arrangement might also lead to exchange of information on control procedures which would be mutually beneficial.

The Committee endorses previous reports of the Special Rabies Committee.

The Committee recommends that the Special Rabies Committee be continued. Report endorsed by majority of the Committee.

s/ C. P. ZEPPE, Chairman

CHAS. W. BOWER EDWIN LAITINEN
GLEN L. DUNLAP J. R. RUBLE
JOHN H. GILLMANN H. W. SCHÖENING
REX TAYLOR

Nomenclature of Diseases

Two years ago the House of Representatives received a report from this Committee that included an outline or scheme for cataloging the diseases of animals (J.A.V.M.A., 1944, 105:335). The outline was to show one of the basic and fundamental problems indigenous to the work of the Committee, namely, that of setting up a system for classifying and recording the names and terms used in North America to designate the diseases and disorders of animals.

The proposed system was discussed at a meeting of the Committee that was held in December, 1944, and again in December, 1945, at which time slight modifications were made in some of its subsections or categories, and a

letter and numeral code was added. It was the consensus of those present at the meeting in December, 1945, that the Committee proceed toward the completion of its report by recording and listing the diseases and disorders of animals in accordance with the system as modified and coded. It was the further consensus that a segment of the system and code be attached to this report. The segment selected pertains to the diseases of the integument (skin, hair and feathers, horns and beaks, hoofs and claws).

CLASSIFIED NOMENCLATURE OF DISEASES OF ANIMALS

- B—Diseases of the Integument
- B.10—Skin
 - B.10.10—Due to prenatal influence
 - B.10.11—Due to infections
 - B.10.11.10—Bacteria
 - B.10.11.11—Viruses
 - B.10.11.12—Fungi, molds and yeasts
 - B.10.11.13—Protozoa
 - B.10.11.14—Parasites
 - B.10.12—Due to mineral poisons
 - B.10.13—Due to vegetable poisons
 - B.10.14—Due to allergies
 - B.10.15—Due to physical forces
 - B.10.16—Due to circulatory disturbances
 - B.10.17—Due to disturbances of innervation
 - B.10.18—Due to or associated with disturbances of metabolism and nutrition
 - B.10.18.10—Water
 - B.10.18.11—Protein
 - B.10.18.12—Carbohydrates
 - B.10.18.13—Fats
 - B.10.18.14—Inorganic salts
 - B.10.18.15—Vitamins
 - B.10.19—Due to neoplasms
 - B.10.20—Due to unknown and obscure causes
- B.20—Hair and feathers
 - B.20.10—Due to prenatal influences
 - B.20.11—Due to infections
 - B.20.11.10—Bacteria
 - etc., etc.
- B.30—Horns and Beaks
 - B.30.10—Due to prenatal influences
 - B.30.11—Due to infections
 - B.30.11.10—Bacteria
 - etc., etc.
- B.40—Hoofs and Claws
 - B.40.10—Due to prenatal influences
 - B.40.11—Due to infections
 - B.40.11.10—Bacteria
 - etc., etc.

The following paragraphs will help to explain the codified system.

The letter is the code designation for the anatomical system of the body affected. Example: A is the letter which designates the **Body as a whole**; B that which designates the **Integument**; C that which designates the **bones** and D that which designates the **joints**.

The first decimal two digit number following the letter designates a subdivision of the anatomical system where a subdivision is necessary for more detailed classification. Example: B.10 is the code sign for the **Integument** (B) and its subdivision, the **skin** (.10). B.20 is the code sign for the **Integument** (B) and its subdivision, the **hair and feathers** (.20).

The second decimal two digit numbers following the letter and the first decimal two digit number convey the etiological phase of the disease. Example: B.10.10 is the code sign for the **Integument** and subdivision **skin** the cause of which is due to a **prenatal influence**. In the case of B.10.11 the anatomic system and subdivision involved is the same as before but the cause is some **infection**. Where the infecting agent is known to be a bacterium then

a third decimal two digit number follows the second, and in this case would be coded as B.10.11.10.

An analysis of the system will reveal that the classifying arrangement includes both topographical and etiological factors. It follows very closely the Standard Nomenclature of Disease that is used in many hospitals and clinics for human beings and endorsed by the American Medical Association. In the opinion of the Committee, it is believed that it is highly desirable to parallel a classification of the diseases of animals with one already in use by the medical profession for classifying the diseases of man.

H. C. H. KERNKAMP, Chairman
 F. R. BEAUDETTE JOHN H. HELWIG
 J. D. BECK I. A. MERCHANT
 M. A. EMMERSON CARL OLSON, JR.
 GEO. H. HART FRANK THORP
 BENJ. SCHWARTZ, Consulting Member

collecting statistical data on morbidity and mortality of animals. Although it is our understanding that the method used will be the "sampling method," instead of actually obtaining definite numbers from each and every practitioner, as well as from other agencies dealing with animal diseases, yet this will give valuable information such as has never been obtained heretofore.

In view of the fact that additional valuable information may be collected by reporting every "reportable" disease to a central agency, this committee recommends that states continue to strengthen their reporting services for the purpose of better animal disease control. We further recommend that this committee be continued.

CHAS. W. BOWER, Chairman
 J. F. BULLARD C. C. FRANKS
 A. B. CRAWFORD L. M. HURT
 HARRY F. DOTSON C. C. MORRILL

Vital Statistics

The Special Committee on Vital Statistics of animal diseases held a meeting Dec. 7, 1945, at the LaSalle Hotel, Chicago. Dr. B. T. Simms, chief of the Bureau of Animal Industry, was present and discussed means of collecting statistical data on animal morbidity and mortality from the angle of the bureau field of each state. It was the consensus of those present that much valuable information could be gathered in this way at a minimum expenditure and effort. The meeting was adjourned with the understanding that the Bureau of Animal Industry would give the idea further and more careful consideration.

Early this year, the Committee on Veterinary Services for Farm Animals, sponsored by the National Research Council's Agricultural Board, has undertaken to promote activity in two related subjects pertaining to the economics of livestock morbidity and mortality. The first of these requires a determination of the number of cases of morbidity and mortality occurring in livestock on farms and ranches. The second is to determine the economics of morbidity and mortality.

The Bureau of Agricultural Economics at Washington, the Bureau of Animal Industry, and the Statistical Laboratory at Ames, Iowa, have all shown great interest in these problems. Some funds have been raised among these groups, and the Statistical Laboratory at Ames is setting up a project to develop methods whereby these questions can be surveyed reliably. It is planned that a survey will be made in Iowa this year. A veterinarian has been added to the staff of the Statistical Laboratory.

In April, the chairman conferred with Dr. B. T. Simms in Washington pertaining to compiling statistical data on animal diseases in the Washington office. Because of the recent activity of the Committee on Veterinary Services for Farm Animals, together with the lack of funds and personnel, he advised that to establish a compiling service at this time would not be feasible. Furthermore, he commented that the Bureau of Animal Industry had appropriated funds to be used by the Committee on Veterinary Services for Farm Animals to make trial surveys. In making these trial surveys, it is hoped that a method will be worked out to collect better statistical data on diseases of animals, thereby saving much expense of experimenting and using impractical methods in the various states.

This committee commends the Committee on Veterinary Services for Farm Animals for their activities to establish a practical method of

Parasitology

In its 1945 report, the Special Committee on Parasitology recommended to the Association (1) that the Special Committee on Parasitology be abolished and that in its stead there be appointed a permanent or standing committee on parasitology, or (2) that, in accordance with the provisions of article 12 of the Administrative By-Laws of the AVMA, the president state the duties of the committee at the time of its appointment. The part of the report containing these recommendations was approved by the Executive Board and adopted by the House of Representatives (J.A.V.M.A., Oct., 1945: 190-191). Unfortunately, neither the Executive Board, when approving the report nor the House of Representatives when adopting the report, elected to choose between the alternatives proposed by the Committee and at the end of the meeting, therefore, the status of the Committee remained unchanged. It now appears, however, that the Committee's recommendations have not gone completely unheeded and it is happy to report that in February of this year the president suggested that this year this committee make a report on "Controlling the Spread of Mange." Since different kinds of mites may be responsible for mange in practically all classes of domestic and wild animals, it obviously was impossible to cover the entire subject in the time available. Therefore, it was decided to restrict the report to mange in cattle as it has lately been reported from New York and some other states in the northeastern section of the United States.

[This report, prepared by Dr. D. W. Baker and delivered as an address at the annual convention in Boston under the title "Cattle Scabies in the Northeastern States," constitutes the chief work of the committee during the year.]

The report says that the losses from lowered milk production, waste of feed and labor, and deaths of weakened and debilitated animals in both beef and dairy herds, all due to this disease, are enormous.

Among the causes contributing to the spread of the disease, the New York State veterinary authorities list the uncontrolled and unsupervised community sales, lack of accurate diagnosis, inadequate treatment, and the practice on the part of owners of cattle of indiscriminately mixing infected and noninfected animals.

The campaign inaugurated by them aims (1) to acquaint both farmers and veterinarians with the disease and its importance, (2) to inform veterinarians concerning the importance of thorough examination and accurate diagnosis,

(3) to outline methods of prevention, and (4) to demonstrate proper methods of treatment.

This campaign, by engaging the interest of all those concerned with the problem through modern means of publicity will, undoubtedly, result in greatly diminishing the incidence of the disease and, provided efforts are persistent and interest is maintained at a high level, may lead to its complete eradication.

The Committee wishes to express to Dr. Baker its sincere appreciation and thanks for the information contained in this report. May his efforts and the efforts of those associated with him be crowned with success.

The Committee wishes to repeat its recommendation of last year that the present Special Committee on Parasitology be abolished and that it be replaced by a permanent or standing committee on parasitology.

s/ G. DIKMANS, Chairman

D. W. BAKER	R. E. REBRASSIER
E. A. BENBROOK	J. N. SHAW
H. S. CAMERON	W. E. SWALES
W. H. KRULL	

Food Hygiene

The Committee has concerned itself chiefly with the formulation of an outline of a food inspection code (January JOURNAL), and of a sample code (June JOURNAL). Reprints of these are available, and the Committee recommends that they be used by states and any of their subdivisions, to provide food which will be sound, healthful, and fit for human consumption.

It is further recommended that the Committee, during the coming year, devote its efforts to presenting to the Association model drawings of a small meat packing house which will include facilities for handling all species of and the manufacture of products derived from such animals.

O. W. SEHER, Chairman

M. O. BARNES	H. E. KINGMAN, JR.
M. R. CLARKSON	E. M. LYNN

Diseases of Dairy Cattle

When this committee was appointed, President Farquharson suggested that we select one of the many important problems pertaining to the diseases of dairy cattle and discuss it from the standpoint of new developments in that particular field. Complying with this request, your committee is submitting the following report which is much shorter and radically different from those of previous years.

After careful consideration, we decided that one of the most important problems confronting the large animal practitioner is respiratory diseases of dairy cattle. We, therefore, report the new developments on this subject.

One of the conditions that we have to cope with is calf pneumonia, which is often accompanied with diarrhea. In most areas of the United States and especially in the North, mortality among calves has been very high due to this condition. Udall¹ has recently reported a system of raising calves which practically eliminates losses from pneumonia and, for that reason, we consider it well worth reporting at this time:

"The calves are left with their dams for the first three days in order to obtain colostrum. On the fourth day, the calf is placed in a box-stall with a nurse cow. In general, there are only 1 or 2 cows in a stall. The calves are rationed at the rate of 10 lb. of milk per day per

calf. In nearly all cases, one side of the stalls is open, or partially open, to the outside,—preferably the south side. At Tarbell Farms, such places as one end of a barn, farm machinery sheds, rows of box stalls comprising a long building, calf barns, box stall, etc., are utilized; sometimes, there is a tarpaulin curtain that may be lowered at night or when there is a cold driving wind. This method of raising calves started in December, 1943. The herdsmen stated that only 1 calf has shown a tendency to suck cows after weaning. A few of the calves wean themselves before the end of four months when all calves are removed from the nurse cow. They bawl until no longer able to make a noise and then go on as mature animals. Across one corner a plank is nailed, under which the calf has access to special calf grain. When calves are raised with nurse cows, they begin to eat grain and hay and drink water at a younger age than when pall-fed. In general, they are livelier, wilder, and more thrifty. In the winter, they soon grow long hair. Shivering is not infrequent but they remain free from respiratory infection. Since this method has been used, there has been no pneumonia in calves raised in this manner.

There is still a high percentage of diarrhea within the first week, and the death rate would be considerable except for the fact that they are checked daily and given sulfathalidene as soon as diarrhea appears. It is important that treatment be started at once. A few deaths have occurred but the owner claims that it is because they did not receive sufficient colostrum or that there was insufficient time to check them carefully and start treatment soon enough. In 1945, 121 males and 121 females were born on this farm. Of the females, only 4 of commercial value died. The deaths, as explained by the owner, were a result of failure on his part to keep track of the calves. The mortality is only a small fraction of any previous record over a period of twenty-five years.

This method of raising calves has been previously reported both in this country and in England, and it has always proved successful.

Many practitioners are claiming excellent results with penicillin in the treatment of respiratory diseases of cattle, especially calves. In calf pneumonia, 100,000 units are administered intravenously every four hours with excellent results. In hemorrhagic septicemia in the adult animal, the dose is from 200,000 to 500,000 units intravenously every four hours. Unfortunately, we have been unable to locate correlated data on this method of treatment, but without doubt some will appear in the near future.

Madden² reports outstanding results in over 150 cases of respiratory trouble in calves and cows with the use of the following preparation—

Sodium Sulfathiazole 2½% w/v
Sodium Sulfapyridine 2½% w/v
Dextrose 5%
1/6 M. Sodium Lactate q.s.

For example, he gives the following case reports: Calf 6 weeks old having a temperature of 106 F., labored breathing. . . . Clinical diagnosis, pneumonia; 40 cc. given intraperitoneally, no other treatment. Within two days the calf was back to normal.

In another herd, in which calf pneumonia was very prevalent, there were 11 cases with temperatures ranging from 104 to 106 F. All were given 1 cc. per pound of weight, intraperitoneally. The dose was repeated on the third day and all made uneventful recoveries.

On another farm, where calf mortality due to respiratory infection and poor care was high, newborn calves were given 40 cc. within the

first twenty-four hours. Since this treatment started, no losses have occurred. In a few cases, a second and third injection was given.

Apparently better results are obtained when this preparation is given the cattle intraperitoneally instead of intravenously. For the early stages of shipping fever, one dose is given and no other treatment is necessary.

One of the latest products to be used successfully in treatment of respiratory diseases of cattle is sulfamerazine (4 methyl-2-sulfanilamido-pyrimidine). Studies by Roblin⁶, Caldwell⁶, and Sprague⁸, and their associates have shown that sulfamerazine is a monomethyl derivative of sulfapyrimidine.

The compound occurs as a white crystalline powder of poor solubility but can be converted into the readily soluble sodium salt.

Experimental and clinical studies⁶⁻⁸ have shown that higher blood levels can be obtained with sulfamerazine than with sulfadiazine or sulfathiazole as a result of several factors, namely, the drug is more completely and rapidly absorbed from the intestinal tract and more slowly excreted; hence smaller doses attain comparable blood levels.

These characteristics are especially desirable in a compound that is to be used in veterinary practice, particularly in the treatment of infections caused by a variety of bacteria. Smaller doses of a drug that can be administered at less frequent intervals, while apparently producing the desired therapeutic results, can be translated into lower cost of treatment and an appreciable saving of time in the administration of medication.

Thorp⁹ employed sulfamerazine in 16 cases of calf pneumonia with satisfactory results. No toxic effects were observed following administration of 1.0 gr. per pound of body weight; and a satisfactory blood concentration, viewed from the standpoint of clinical results, was obtained in calves with this dosage. In several calves upon which blood studies were made, concentrations of total drug of from 6 to 8 mg. per cent were obtained. No studies were conducted with calves weighing more than 100 lbs., but on the basis of work with other sulfonamides it was considered possible to reduce the dose. This supposition was not confirmed.

Fincher and Roberts¹⁰ found sulfamerazine effective in the therapy of pneumonia in calves. Their schedule of treatment was 0.15 Gm. per kilogram (approximately 1 gr. per lb.) of body weight on the first day, 0.10 Gm. per kilogram (0.75 gr. per lb.) of body weight on the second day, and thereafter 0.075 Gm. per kilogram (0.5 gr. per lb.) of body weight daily. Fourteen out of 18 cases so treated recovered. One of the 4 that did not survive was destroyed for purposes of autopsy.

An Illinois veterinarian reports the use of sodium sulfamerazine intravenously in 21 cases of calf pneumonia. These calves ranged in age from 1 to 5 months. Their temperatures ranged from 102 to 106.8 F. They were given 5 to 12 Gm. intravenously, with 7 given a second dose. Of this group, 19 made a complete recovery while 2 died.

McAuliff¹¹ used sulfamerazine in the treatment of hemorrhagic septicemia of cattle. In the first 22 cases, the drug was administered daily in a dosage of 1 gr. per pound of body weight in divided doses every six hours for two days, with a reduction thereafter to 0.5 gr. per pound of body weight per day, in two doses twelve hours apart for three days. At the same time, from 100 to 250 cc. of hemorrhagic septicemia antiserum were administered to the sick animals and, prophylactically, 50 cc. were administered to all exposed animals. All of the animals

recovered. In general, the temperature returned to normal in from three to four days, although in 5 animals, a week elapsed before this took place. Two of these 5 later succumbed to traumatic gastritis, 1 within two weeks of initial symptoms and the other in two months. A third and fourth aborted on the ninth and twelfth days, respectively. On the basis of experience with hemorrhagic septicemia in cattle, McAuliff considers elevation of temperature for several days as a hazard to the fetus, since pregnant cows with fever frequently abort within two or three weeks.

The results in this first series of cases prompted McAuliff to increase the dosage of sulfamerazine in the next series of 81 animals, 1.5 gr. per pound of body weight being administered during the first twenty-four hours in divided doses every six hours, followed by 0.5 gr. per pound of body weight for two or three additional days divided into two doses a day, twelve hours apart. In the 81 cases so treated, the temperature of 64 animals returned to normal in twenty-four hours, 12 returned to normal on the second day, and the remaining 5 on the third day. In cases where pneumonia was present for several days, recovery was deferred a few days longer.

Of these 81 cases, 42 also received hemorrhagic septicemia antiserum in the same dosage as the first group of 22 cases. In the remaining 39, however, no serum was administered. Judging from the results among the latter, the administration of serum had no appreciable influence on the rate of recovery, since the end results in those that received serum and those that did not were identical.

In calf pneumonia, McAuliff has used the same dosage schedule with sulfamerazine and obtained satisfactory results. It was found that the use of sodium sulfamerazine administered intravenously in doses of 1/3 gr. per pound of body weight resulted in a marked temperature reduction within twenty-four hours. As a precautionary measure, in valuable animals, 0.5 gr. per pound of body weight was administered orally in divided doses every twelve hours for several days.

This worker also obtained favorable results from the use of sulfamerazine in septicemia associated with mastitis and metritis, but the number of cases treated was too small to warrant definite conclusions.

In summary, McAuliff stated that "It is essential to commence treatment with an adequate dosage of 1.5 gr. per pound of body weight on the first day in order to obtain the desired results. This is followed by a dosage of 0.5 gr. per pound of body weight for two or three days. Since sulfamerazine, when used as described, promotes clinical recovery on less frequent dosage, we feel that it is the sulfa drug of choice. No toxic or untoward effects were observed."

Wade¹² employed sulfamerazine in the treatment of pneumonia in 10 calves weighing from 100 to 150 lb. A total dosage of 120 gr. per day was used. During the first three days of treatment, the quantity of drug was divided and given in four equal doses and each day thereafter in three doses daily. Five calves were treated for a period of four days, 1 for ten days, and 4 for thirteen days. Each calf also received 20 cc. of hemorrhagic septicemia antiserum on the first day of treatment. Two untreated calves died with symptoms of enteric and pneumonic infection as manifested by diarrhea and dyspnea.

Wastrack¹³ obtained excellent results with sulfamerazine in the treatment of pneumonia in 13 calves. His dosage schedule was 0.15 Gm. per kilogram (approximately 1 gr. per lb.) of

body weight the first day of treatment. In the second and third days, the dose was reduced by one-half. In these cases, a three-day treatment proved adequate, for the calves recovered satisfactorily.

Wastrack used sulfamerazine also in the treatment of pneumonia and hemorrhagic septicemia in 16 mature cattle. In these animals, the dose on the first day of treatment was about 0.075 Gm. per kilogram (approximately 0.5 gr. per lb.) of body weight, and was reduced by one-half on following days.

Seven cows suffering from septicemia associated with metritis or mastitis were treated orally with sulfamerazine by this investigator. In a few cases, Wastrack placed several ounces of sulfamerazine powder in the uterus following manual removal of the placenta. Apparently, this procedure was helpful in preventing infection that usually accompanies this condition.

Osen¹¹ employed sulfamerazine and brought about the recovery of 4 steers suffering from shipping fever. The animals weighed from 400 to 700 lb. A daily dosage of 0.15 Gm. per kilogram (approximately 1 gr. per lb.) of body weight was administered twice a day for three days. One steer had been receiving sulfathiazole for three days without benefit. Following the change to sulfamerazine, decided improvement was noted within twenty-four hours after administration of the initial dose.

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s/R. N. SHAW, Chairman
 M. R. BLACKSTOCK A. G. MADDEN, JR.
 J. N. CAMPBELL FAY G. RANKIN
 E. F. JOHNSTON W. S. SHAW

Diseases of Beef Cattle

At the request of the officers of the American Veterinary Medical Association, the Committee on Diseases of Beef Cattle was asked to confine its efforts toward obtaining information relative to respiratory diseases of calves.

Accordingly, an effort was made to obtain

data relative to their incidence. A questionnaire* was sent to officials in many of the states in the United States, including directors of experiment stations and county and state veterinarians.

The response to the questionnaire was nearly 100 per cent and for those who were kind enough to reply we wish to express the gratitude of ourselves and the appreciation on the part of the veterinary profession as a whole. One member of our committee, Dr. Kenneth McKay, distributed more than 50 copies of the questionnaire to different men throughout the state of California. Dr. McKay is to be congratulated for the splendid cooperation that he has given. The same is to be said of the other members of this committee.

The information obtained was disconcerting in many respects, but perhaps that in itself is valuable and it may serve as an incentive for further investigation.

s/ H. E. KINGMAN, (SR.), Chairman
 A. R. CAMPBELL E. R. FRANK
 J. C. CAREY L. R. VAWTER
 L. M. DARST O. E. WOLFE

Diseases of Sheep

The discussion of the various parasite and disease problems of sheep is confined strictly to those which need investigation and clarification, no attempt being made to discuss all the ailments of this animal. Since the sheep business in this country naturally falls into three divisions—farm flocks, range flocks, and feeder lambs—this report follows the outline adopted by the 1944 committee in discussing the various problems.

FARM FLOCKS

Infestations with the internal parasites, particularly the round worms, cause more loss among farm sheep than all other diseases combined.

With the advent of phenothiazine we were provided with an extremely efficient tool for the control of the greater stomach worm (*Haemonchus contortus*) and the nodular worm (*Oesophagostomum columbianum*).

This drug, however, is not nearly so efficient in ridding sheep of the smaller stomach worm (*Ostertagia* spp.) and the intestinal worms, *Trichostrongylus* spp., *Cooperia* spp. and *Nematodirus* spp. While the phenothiazine-salt mixture (1 to 10), free choice, has given encouraging results, appreciably reducing egg-hatching, individual treatment of the badly infested animal with phenothiazine leaves much to be desired. A continued search for safe, efficient anthelmintics for these parasites is clearly indicated.

Extensive tests of the newer medicines, notably hexachlorethane, for fluke-killing efficiency in sheep are needed where the common liver fluke, *Fasciola hepatica*, constitutes a problem. The occurrence of black disease (*Clostridium oedematiens* infection) in some sections of the country emphasizes the need for increased work on the fluke problem since this soil-borne anaerobe needs the fluke injury to the liver to establish infection.

So-called stiff-lamb disease, distinct from white muscle disease, occurs commonly in both farm and range flocks, particularly in the Southwest. The affected animals recover, but

*The results of the questionnaire will be published as an article in the JOURNAL when they are available.

the loss of weight and condition during the three-weeks course of the disease is economically important. Cause, efficient methods of treatment, and prevention are not known and merit investigation.

Pregnancy disease (ketosis, stercoremia, etc.) is common and certainly warrants further study. The well-nourished, farm-flock ewe, often carrying twin fetuses, is the usual victim, in contradistinction to the occurrence of the trouble in the thin, poorly-nourished range ewe carrying a single fetus. There is some evidence that acute thiamin deficiency is the precipitating factor in the thin range ewe. Whether the same thing holds true for the well-nourished farm ewe is a moot question. Certainly there is need for much more work on the whole problem.

The pneumonia complex (too often called hemorrhagic septicemia) is primarily a feeder lamb problem but occurs often enough among farm flocks to emphasize the importance of further investigation, especially as to cause and prevention.

Much further information regarding the vitamin and mineral requirements of sheep in farm flocks on the usual rations is needed, especially in view of accumulating evidence that the birth of weak lambs, still births, and allied troubles may very well be the results of feeding rations deficient in essential substances.

RANGE FLOCKS

So far as round worms are concerned, the preceding discussion applies as well to the range flocks, especially in the southwestern sheep states where many of the range bands are run in permanent fenced pastures and the roundworm menace is ever present.

The fact that, in some of the mountain states where black disease occurs, an efficient means of immunizing sheep against this infection has been developed does not obviate the necessity for continued work on the destruction of the liver fluke *Fasciola hepatica*.

The fringed tapeworm, *Thyssanosoma actinoides*, is prevalent in sheep throughout the range states. The life cycle of this parasite outside the host is unknown. What is the intermediate host? How long is the developmental period outside the sheep? Is there a practical means of breaking the life cycle and thus preventing infestation of the sheep? The economic importance of this parasite, principally condemnation of the infected liver, makes intensive investigation of the problem imperative.

The whole question of mineral supplements for the range sheep should be the subject of concentrated study. There is a dearth of factual information on this subject.

The whole subject of poisonous plants, which cause large losses among range bands every year and also occasion appreciable losses among farm flocks, should be continuously studied, especially as regards isolation of the toxic principles and the development of efficient antidotes. It is well to bear in mind that, with the single exception of treatment for hydrocyanic acid poisoning, we do not have any dependable, satisfactory antidotes for plant poisonings in animals. The fact that many plants are known to be poisonous for sheep, coupled with the further fact that the toxic principles of several of them are known, merely serves to emphasize the gap in our knowledge as to what to do about it when plant-poisoned animals are encountered. For all practical purposes, the development of efficient antidotes for plant poisonings is a virgin field for both the organic chemist and the veterinarian. And there is little question that efforts in this field would be rewarded.

At times, pregnancy disease occasions very large losses among thin, poorly-nourished range ewes. The fact that this malady is economically important in both farm and range ewes points up the need for further investigation as to the true cause, efficient treatment, and methods of prevention.

The stiff lamb disease, mentioned under Farm Flocks, also occurs sporadically among range lambs and occasions sufficient weight loss to make it important and worthy of study.

Rather large losses of nursing lambs from sporadic outbreaks of enterotoxemia occur among range flocks of several of the western states every year. The original work of Bennetts in Australia, followed by the findings of several investigators in this country, has not cleared up completely, as yet, the etiology and "mechanics" of this disease. The rôle of the toxin of *Clostridium welchii*, Type D (isolated from the gut contents of typical cases) is still the subject of debate. Since apparently the same condition, under the name of overeating, often causes large losses among lambs in the feedlot, there can be no question that further investigation of the disease is needed.

Foot rot is of extreme importance among range bands in several of the mountain states. While *Actinomyces necrophorus* has been accused of causing the disease, there is reason to suspect that this organism is a secondary invader and that the real cause has not yet been found. Beside investigation to discover the exciting cause, we need efficient practical methods of treatment and prevention.

Necrotic mastitis (blue bag) occurs sporadically among range ewes, and very often causes extremely large losses. One hundred to 300 head in a band of 1,000 is not uncommon. The disease also is often seen in farm ewes. Despite the fact that the condition has been investigated by various workers, we still do not know either the originating cause or all of the contributory factors. A species of *Pasteurella* has been isolated from some cases, a *Micrococcus* from others, and the anaerobe, *C. welchii* (type not specified), from still others. Efficient means of treatment and prevention are not known at present.

The infectious venereal disease of rams and progressive pneumonia ("lungers") constitute more or less local problems among range sheep in some of the mountain states, which need further investigation.

FEEDER LAMBS

The internal parasite problems which furrow the brow of the lamb feeder are coccidiosis—loss of weight and/or death loss, and fringed tapeworm (*Tenia actinoides*) infestation—liver condemnation in the slaughtered lamb.

While coccidium is invariably present in the intestines of both range and farm lambs, it is seldom that the infestation manifests itself clinically in these animals. But it constitutes a serious problem and occasions large losses among feedlot lambs. While much work has been done on this disease, more complete knowledge regarding management, sanitary measures, and therapeutic medicines is urgently needed.

The fact that the fringed tapeworm (*T. actinoides*) is a problem in the feedlot lamb as well as in the range animal merely emphasizes the necessity for intensive work on this parasite.

Overeating (enterotoxemia) at times occasions severe losses among feeder lambs, usually affecting the largest, best lambs just about the time they are commencing to "bloom." As stated under the discussion of the same disease in

nursing range lambs, further study of the problem is certainly needed.

The so-called pneumonia complex, or hemorrhagic septicemia-like disease, which too often occurs among lambs within a week or ten days after the animals are shipped and placed in the feedlots, needs much further investigation. Reams have been written on the subject, particularly as to the rôle of *Pasteurella multocida*, variety *ovis*, but convincing evidence as to the true cause of the condition remains to be presented. There is no question that fatigue, lack of proper feeding and watering and overcrowding, etc., incident to shipping, are important contributory factors in all outbreaks but the underlying cause is still a subject of debate. Satisfactory treatment, medicinal and biologic, together with efficient methods of management and prevention, deserve further investigation.

The occurrence of urinary calculi in the feeder lamb often constitutes a serious problem and may entail very considerable death losses. Lack of vitamin A in the ration unquestionably plays a part in the formation of the calculi; however, that other unknown etiologic factors enter into the problem is beyond dispute. We need to develop both efficient means of prevention and satisfactory methods of treatment.

S/I. B. BOUGHTON, Chairman
W. D. ANDREWS N. G. CORBETT
THOMAS CRISPELL

Diseases of Swine

Your committee, at the suggestion of the house of representatives, will report only one phase of swine diseases this year. It was suggested that the report should deal with diseases of the baby pig.

It is our feeling that, first of all, we must have a definition of "baby pig"—therefore, this will include the first fourteen days of life. There are obvious reasons for us to include in this report the gestation period of the sow. Many pig losses take place during this period, and it exerts a decided influence on the baby pigs following farrowing. Therefore, we will take into consideration the breeding stock, swine husbandry of the herd—which includes the nutrition of the sow during the gestation period—the proper care of the sow and pigs at farrowing and, finally, the various problems encountered in the nursing pig during the first fourteen days of life.

No attempt will be made to give clinical symptoms or treatment of the conditions discussed. It is the committee's desire to point out certain conditions and state, whenever possible, the fundamental causes of the disturbances, thereby having a compilation of these conditions which will be accessible to the profession.

It has been shown, quite conclusively, that both boar and sow play an important part in the type and vigor of the pigs farrowed. Of course, this factor must be accompanied by proper nutrition and care. It appears that the prevailing genes, so to speak, are sometimes supplied by the boar and in other instances by the sow. These factors should always be considered in the purchase of breeding stock. We believe that it is a scientific fact that a strong, vigorous boar bred to a medium sow does result in average pigs, but when this type of boar is mated with a strong, vigorous sow, the pigs are exceedingly strong and losses following farrowing are reduced.

Faulty nutrition has been recognized for some time by those who study nutritional problems, and only comparatively recently by the members of our profession. If we have the proper

breeding stock and fail to supply the proper amounts of nutrients to the sow during gestation, there may be small litters, pigs weak at farrowing time with death losses exceedingly high, and those animals that do survive may require excessive time and feed to grow them to maturity. In this faulty diet, we refer principally to the lack of calcium, phosphorus, protein (both animal and vegetable), vitamins A and D, iodine, iron, and other trace elements. From experimental work reported on other animal species, it is quite evident that the lack of protein plays a very important part in the vigor and rapid development of the offspring.

The lack of sufficient vitamin A in the diet of the sow prior to breeding and during the gestation period often results in the birth of dead pigs or those so weak that they die shortly after birth. Pigs may be born with various defects and abnormalities, including absence of the eye, various developmental defects such as accessory ears, subcutaneous cysts, cleft palates, faulty kidney development, and malformed hind legs.

Hypoglycemia is becoming more prevalent and, without a doubt, is primarily due to the inability to supply to the fetus during gestation—by means of the fetal circulation or through the first milk—the necessary amount of sugar required to nourish the young animal body properly. Whether this is due to a lack of the proper carbohydrates in the feed of the sow or to an endocrine disturbance which fails to utilize or convert these carbohydrates, we are unable to say. It is evident that fasting for twenty-four hours will result in a lowering of the blood sugar and in typical cases of this disturbance.

Infectious disturbances which occur during the gestation period cause heavy losses in the pig crop. An attack of swine flu during gestation may cause the sow to abort her pigs, with loss of the entire litter, or it may result in carrying the pigs the full period with a large number being born dead or so weak that they die within a day or so.

Infection of the sow with *Brucella suis* may have a similar effect. In this condition, plans have been published, which give a satisfactory method for the control of brucellosis in swine. Reports of certain experiments show that this condition has been controlled quite satisfactorily following the use of *Br. abortus* vaccines prepared from strain 19. There have also been adverse reports following the use of this vaccine. We wish to call these facts to your attention, but we await the reports of a greater number of investigators and the use of this product on a more extensive scale and over a greater period of time, in completely controlled experiments. Experimental work has been carried on for some time in the use of another type vaccine for the control of brucellosis in swine which looks more promising, but we wish to state that, at this time, the blood test, segregation, and slaughter method is probably the most reliable and satisfactory.

Mismanagement at the time of farrowing or for the first few days afterwards accounts for a considerable loss. Overlaying is not uncommon, and just the placing of guard rails in the farrowing pen satisfactorily controls this problem. In the northern states, where sows farrow during cold weather, the use of an electric brooder or warmer does an excellent job. This keeps the pigs warm and at the same time prevents overlaying. Cannibalism, which is not prevalent, can be controlled fairly well by supplying the sow with plenty of animal protein during the gestation period. This does not seem to prevent the problem in all cases, but is very beneficial.

Scours, which occur within the first forty-eight to seventy-two hours, is usually caused by improper feeding of the sow. There may be a lack of vitamin A in the colostrum, and also the aftermilk, or the sow may have access to feed which causes a toxic condition which is secreted in the milk; there may be available to the sow feed which causes constipation, or other disturbance in the sow's metabolism, and results in secretion of an abnormal milk that cannot be digested by the pig. Scours at this period are usually not infectious in character, and it is advisable to make a careful investigation of the source and quality of the feed supplied, an examination of the sow for a possible rise of temperature, and of the condition of the mammary glands.

Uremia in baby pigs may be widespread. According to the report of the Chief of the U. S. D. A. Sept. 6, 1945, "Acute uremia in young pigs was found to be the cause of death among a large percentage of pigs dying within the first nine days of life in the experimental herd at Beltsville. Typical cases showed considerable amounts of orange colored deposit in the kidneys, ureters, and urinary bladder. A similar condition was produced experimentally in young pigs by withholding food, thus indicating that the condition may be caused by faulty management in the feeding, or management of the sow at farrowing time, and her failure to come in milk properly after farrowing. Individuals from fall and spring litters both may be affected."

Anemia should be guarded against whenever baby pigs are kept indoors. It may develop to the point where considerable damage is done—even before the pigs are 2 weeks old.

Postnatal diseases, infectious in character, are important. In certain states, swine erysipelas has become a prime factor in the loss of baby pigs. In fact, in some instances, these losses have led to the first positive diagnosis of swine erysipelas on certain premises. In those areas where vaccination with serum and culture is practiced, the infection is controlled in young pigs by this method. Pigs have been treated within the first twenty-four hours of life with good results.

Baby pig pneumonia and scours seem to go hand in hand with the colder sections of the country. Many histories and examinations will lead one to feel that there has been a deficiency in the beginning—deficiency mostly of vitamins A and D in the colostrum and aftermilk of the sow. The condition may become infectious in character after a few days of exposure to the contaminated surroundings. In the control of these disturbances, stepping up of vitamin A in the intake of the young pig will usually be helpful.

There is a transmissible gastroenteritis which has been observed to be very destructive in new born pigs, and less fatal in older animals. It sometimes destroys practically the entire pig crop on affected farms, particularly where a number of newborn litters are kept close together, as in a central hog house.

It has been the endeavor of your committee to present the most prevalent conditions which are encountered in swine breeding herds. There are a few disturbances which could be added, but they are not sufficiently widespread to justify inclusion at this time. Some of these problems need further study—gastroenteritis, hypoglycemia, uremia, and the vitamin deficiencies which might play an important part in the first fourteen days of the pig's life.

FRANK BREED, Chairman
J. B. BRYANT L. A. GRAY
L. P. DOYLE T. L. STEENERSON

Diseases of Horses

The members of the committee report that there have been no unusual diseases of horses or mules. Equine influenza continues to be a problem among horses passing through sale stables, but it is believed that the death rate has been small.

s/ W. F. GUARD, Chairman
JOHN D. GADD D. L. PROCTOR
P. G. MACKINTOSH J. L. TOPPING

Diseases of Small Animals

This committee, being held over from the previous year, has continued to correspond and hold informal meetings. The matters discussed and its recommendations are similar to those offered last year.

It is felt that the development of the AVMA Research Fund will be of material aid in sanctioning investigative projects in small animal medicine. The results of this research will crystallize many opinions so that more definite policies in disease control may be pursued. This, in turn, will hasten the standardization of both surgical and medical procedures.

It would seem that the Research Council should encourage the use of the AVMA funds to investigate that complex group of diseases in the young dog spoken of as encephalitis, hysteria, or convulsions. This disease complex has been reported from every part of the American continent, and little or no progress, either from the prophylactic or curative standpoint, has been made. The condition has been most discouraging both to the breeder and the veterinarian.

Newer and greater responsibilities and opportunities are developing with amazing rapidity. Small animal practice is on the threshold of important advances. However, many feel that if these demands on the profession are to be met, there must be more adequate specialized training of the young veterinarian. The responsibility of this would naturally fall upon the educational institutions. The small animal teachers from different schools should be encouraged to meet at regular intervals to discuss the type of training which would best equip veterinarians for this field. Many valuable suggestions could be gained if this group were to invite selected practitioners to meet with them.

Movies and lantern slides illustrating standardized techniques and new procedures would be welcome and appreciated by those men now in the field who wish to improve and develop their methods and increase their knowledge.

Some of these visual education projects could well include information as to the development and formulation of practical plans for parasite and disease control in dog-breeding kennels, as well as the more technical attainments. Such plans would be very practical for both the veterinarian and the dog breeder.

It is recommended that the Special Committee on Small Animal Diseases be continued and that their efforts be specifically directed toward projects which would materially benefit and improve the care and treatment of small animals. The committee believes that small animal medicine would be greatly aided if the following recommendations were carried out:

- 1) That the Research Council sponsor certain special investigation in small animal diseases.
- 2) That plans be formulated to develop practical methods for parasite and disease control in dog-breeding kennels.
- 3) That special training be provided so vet-

erinarians might better equip themselves to render greater service in this specialized field.

- 4) That thought be given the standardization of methods and procedures so that the service rendered will become more uniform.
- 5) That movies and lantern slides depicting better small animal medicine be produced and placed in the film library.

s/WAYNE H. RISER, Chairman

C. E. BILD STANLEY E. PHILIPS
G. G. McDONALD K. W. SMITH

Diseases of Wild Animals

The veterinary profession has at least three primary obligations: 1) the protection of the livestock industry of the country; 2) the protection of human health against diseases common to man and animals; and 3) the protection of wildlife against disease. In fulfilling these obligations, a full knowledge of the interchange of diseases of wild and domestic animals is imperative. It is known that wildlife can and does act either as a carrier or a reservoir for such diseases as tularemia, rabies, brucellosis, encephalomyelitis, malignant edema, tuberculosis, blackleg, foot-and-mouth disease, anthrax, and certain parasitic diseases.

In some sections of the country, epizootics of rabies in domestic animals have been associated with the disease in foxes. Fox populations have increased greatly during the past two or three years throughout almost the entire North American range. It is known that wildlife populations are cyclic and depend upon the presence or absence of various decimating factors. Disease, undoubtedly, is of great importance in the reduction in numbers of wildlife species when a population peak is reached. If the rabies outbreaks in domestic stock can be traced to the disease in foxes, concerted efforts should be made by conservation agencies to control the fox population. If the reverse is true, it would appear foolish to fight the disease in domestic stock without offering some protection to the fox. This situation serves as an example to emphasize the importance of a complete knowledge of diseases of wild animals.

In this atomic age, emphasis seems to have been placed on methods of destruction rather than conservation. Wildlife is entitled to protection as much as we ourselves. To permit a single species of wildlife to be in danger of extinction through disease ravages is a matter for serious thought.

Public health officials are extending their research programs into the wild animal kingdom for the elucidation of some of the obscure human infections. It is encouraging to know that some veterinary colleges are considering instituting courses in diseases of wildlife. When such courses become a part of the curriculum of all the colleges, we can say that proper attention is being focused on the entire animal disease picture. Further encouragement is found in the action of Congress providing legislation reestablishing the responsibility for fur animal research in the United States Department of Agriculture.

The Committee recommends that the Association include diseases of wild animals in its veterinary research program.

s/LEONARD J. GOSS, Chairman

J. E. SHILLINGER S. C. WHITLOCK

Postwar Planning

WORK PREVIOUSLY INAUGURATED

Two years ago this committee advanced ideas of how veterinary disease-control projects could include more fully veterinarians who are engaged in the practice of medicine. We are glad to report that our suggestions met a hearty response and that several additional states have provided funds from which practicing veterinarians may be paid to participate more generally in public disease-control projects, and that this fact has added much to the effectiveness of the work and also has served to eliminate discord among veterinarians of the several groups.

The committee set up an outline for guidance of municipalities which desired to establish a meat-inspection system, including veterinary antemortem and postmortem inspection. The establishment of numerous refrigeration plants, with individual lockers, to care for the increased slaughtering of animals in the producing and fattening areas emphasizes the growing need for safeguarding the public through the type of inspection we have suggested. We find that this outline has been helpful for the purpose intended.

The chairman of this committee had the honor of collaborating with the Special Committee on Food Hygiene in drafting "A Guide for the Preparation of Legislation Covering the Inspection of Articles of Human Food" (see the JOURNAL, January, 1946, pp. 25-26). This plan should provide much help in the preparation of ordinances governing the sanitary control of food preparation.

CO-OPERATION OF PROCUREMENT AND ASSIGNMENT SERVICE COMMITTEES

At the meeting with P. and A. chairmen in Chicago in December, 1945, and by letter, a majority of the chairmen of the procurement and assignment committees, have given assurance of the cooperation of their respective committees in helping to make veterinary service available where there is a need, and to broaden veterinary service to include those fields in which veterinarians are trained.

PUBLIC RELATIONS OFFICER FOR VETERINARIANS

Great need exists for a public relations officer among veterinarians. Perhaps in some states the veterinary population is sufficient to justify a man devoting full time to veterinary affairs. In sparsely serviced regions, groups of states might be composed into a unit. The possibilities for professional advancement from this type of activity deserve extensive study. A survey of this type of service made last year elicited information which is tabulated below.

States with Extension Veterinarians and Time Allocated to Private Practitioners of Veterinary Medicine

State	Pract. Time	State	Pract. Time
Calif.	10%	N. Mex.	5%
Ill.	25%	Oklahoma.	100%
Ky.	25%	S. Dak.	20%
Maine	12.5%	Wis.	50%
Minn.	20%	Va.	25%
Neb.—Extension veterinarians on military leave.			

SUMMARY

Ten states in the above table indicated ex-

tension veterinarians spend only 29.2 per cent of their time with private practitioners.

States Planning the Appointment of Additional Extension Veterinarians

California	2	Illinois	1
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States with Accredited Colleges of Veterinary Medicine Employing Extension Veterinarians and the Time Allocated to Private Practitioners of Veterinary Medicine

State	Ext. Vet.	Pract. Time	State	Ext. Vet.	Pract. Time
Alabama	No reply	No reply	New York	No	....
Colorado	Yes	25%	Ohio	No	....
Iowa	Yes	....	Pennsylvania	No	....
Kansas	Yes	50%	Texas	Yes	25%
Michigan	Yes	33.3%	Washington	No	....

SUMMARY

Nine states in the above table have five extension veterinarians who spend an average of only 26.6 per cent of their time with practitioners of veterinary medicine.

States Planning the Appointment of Extension Veterinarians

Connecticut	Pennsylvania
Nevada	Tennessee
Kentucky—To replace the late Dr. Polk.	

States Servicing Private Practitioners by Research Groups or State Department Staffs

State	Research Groups	Lab. Service	State Dept. Staffs
Ariz.	Yes	Yes	....
Ark.	Occasion-	ally	Yes
Del.	Yes	Yes	....
Fla.	Yes	....	....
Idaho	Yes	....	....
Ind.	Yes	Yes	....
Iowa	Yes	Yes	....
La.	Yes	....	....
Mass.	....	....	....
Mont.	....	Yes	Yes
N. H.	Yes	Yes	....
N. Car.	Yes	....	....
N. Y.	Yes	Yes	Yes
N. Dak.	....	Yes	....
Ohio	Yes	Yes	....
Ore.	Yes	Yes	....
Pa.	Yes	Yes	....
R. H.	....	Yes	Yes
Tenn.	....	....	Yes
Utah	....	....	....
Vt.	Yes	....	....
Wash.	Yes	Yes	....
W. Va.	....	....	....
Wyo.	....	Yes	....

SUMMARY

Twenty-two states in the above table.

Sixteen states indicated their research groups and/or laboratory facilities are available to private practitioners of veterinary medicine.

Five states indicated they depend on the state department staffs for consultation and laboratory diagnosis.

Three states indicated that there is no co-operation between educational institutions and

regulatory department of the state for consultation or laboratory diagnostic confirmation.

The questionnaires were mailed Nov. 9, 1945. On Dec. 1, 1945, the following states had not replied:

Alabama	Maryland	Missouri	S. Carolina
Georgia	Mississippi	New Jersey	

RESUME

The survey reveals the magnitude of the educational job before us to properly serve the private practitioners of veterinary medicine so that they, in turn, will more capably serve the livestock industry of the United States.

Even in the states where extension veterinarians are presently active, only approximately one-fourth of their time is allocated to consultation work with practitioners of veterinary medicine.

RECOMMENDATIONS

All states should have at least one extension veterinarian.

All extension veterinarians should spend at least 50 per cent of their time with private practitioners in project work and consultative capacity.

ENCROACHMENTS

Encroachments upon the veterinary profession have been made to appear as a major hazard and, for this reason, the Postwar Planning Committee of the AVMA set forth this fact in a letter which was sent to 100 key men. The letter follows:

"Our purpose in writing you and a number of others in key positions in the veterinary field is to first make a few statements beyond the conjecture stage, and then ask a question.

Statement: Encroachments upon our profession by organized groups and individuals have been taking place for some time. Among other things, it is the opinion of some of these people that so-called technicians should take blood samples and inject tuberculin in connection with the projects of brucellosis and tuberculosis eradication. They set forth that there were insufficient veterinarians to care for the sick animals and to do the testing contemplated when these disease projects were set up.

Having these and other things in mind, the Postwar Planning Committee of the AVMA has made a study of the distribution, number, and occupation of veterinarians throughout the country. Data on this subject have been and will be made available through the columns of the AVMA Journal.

Work which should be done by veterinarians far exceeds the amount that can be performed by our personnel. If this situation is not corrected, further encroachments may be anticipated. Our veterinary colleges, operating at full capacity, can process only 450 students

annually. This number is insufficient for replacements and provides for no gain in the total number.

Question: Will you give us your frank opinion as to the remedy for this problem?" In answer to the question as to the remedy for encroachments, 21 state veterinarians, 11 deans (or other faculty members of veterinary schools), two practitioners, and four commercial veterinarians suggested that there were not enough veterinarians.

Twenty-one state veterinarians went beyond the question to say that they did not have enough veterinary personnel to care for the brucellosis and tuberculosis work or to take care of practice.

Several large areas, according to the replies

On the basis of these replies, it seems that the preponderance of opinion is that there are insufficient veterinarians at this time. Hence, the question is raised as to what action, if any, should be suggested along that line and, if so, upon what group or committee this task should fall.

During the interval from 1941 to 1949 inclusive, there will have been added to the profession 4,944 graduating students based upon present estimates for the years 1946-1949 and those actually graduated 1942-1945. (Since it is practically impossible to ascertain the definite numbers of graduates of the Canadian colleges which may enter the profession in the United States, it was thought best to include the numbers graduated and prospectively to be gradu-

NUMBER OF VETERINARIANS

The Number of Veterinarians Graduated and in Prospect to be Graduated for the Years Listed
(source — AVMA office and personal letters from deans)

School	1940	'41	'42	'43	'44	'45	'46†	'47	'48	'49
Ala. P. L.	48	51	55	97	47	59	34	30	27	25
Colorado A. & M.	34	32	72	30	75	31	37	18	21	35
Cornell	44	38	43	74	42	60	38	28	..	46
I. S. C.	57	60	55	120	59	57	57	17	..	54
K. S. C.	58	61	53	100	51	53	70	60	..	60
M. S. C.	63	50	68	99	54	49	80	40	..	64
U. of Montreal	13	12	10	5	*	7	10	10	10	10
O. S. U.	45	54	53	117	69	56	89	19	..	52
Ontario	58	56	55	41	14	38	21	32	44	133
U. of Pa.	38	44	42	86	42	44	37	42	35	31
Texas A. & M.	35	72	49	123	45	64	62	48	55	44
Washington	28	40	42	32	72	36	76	..	35	44
Totals	521	570	597	924	570	554	551	344	227	598

*Figures not available.

†Estimates for 1946 and succeeding years will need to be modified when effects of deceleration are known.

of state veterinarians, were without veterinary service. For example, there are 15 counties in Oklahoma and 17 in Kansas which do not have this service.

In three states, Kansas, Oklahoma, and Utah, county agents are used to some extent to take blood samples incident to the test for brucellosis.

Two state veterinarians reported that they were sympathetic to the use of technicians to help do testing work.

There were several suggestions that some type of training, such as internship, would improve the situation. Also, a few felt that post-graduate training should be encouraged.

Of the 11 deans or faculty members who replied, six favored increased enrollment. Four felt there was need for additional veterinary schools. Three felt the situation would right itself and that there was no need for alarm. One dean states that veterinary medicine is a limited field and that there was danger in increasing the number.

One dean felt that postgraduate education for practitioners should be fostered. Two deans favored the expansion of veterinary medicine into fields of animal-disease control, in which the profession is now inactive.

Of the four replies from men associated with veterinary commercial companies, all agreed that their experience in distributing pharmaceuticals and biologic products has shown need for additional veterinarians rendering a more complete veterinary service. This, they stated, is the only solution to encroachments.

The two replies from practitioners emphasized that we need more veterinarians, which means more educational facilities, and we must not compromise with charlatanism.

ated there in these computations.) During the same interval, based upon death rates given in Statistical Abstract of the U.S. 1943, U.S. Department of Commerce, Bureau of the Census, p. 76, by death alone there will have been a loss of 2,018 from the profession in 1942. Among those graduated from 1943 to 1949 inclusive, 102 will have died. The total loss due to death alone would be 2,120. There were in 1942, 12,305 veterinarians in the continental United States. There will be then a total of 15,129. An estimate of 1,500 veterinarians for the Veterinary Corps of the United States Army would leave a net total of 13,629. This would provide a gain of 1,324 during the interval for additions for work beyond minimum losses by death and for army requirements. In 1943, better than 900 were graduated and, during 1945 and 1946, many veterinarians from the Army Veterinary Corps will be returning to peacetime activities. The one disconcerting part of the picture is that of the 1,324 gain, 607 will be prospective graduates for the one year 1949. For 1945, the number graduated was 554, for 1946 there will be prospectively graduated 551, in 1947, 344, and for 1948 only 227.

In the AVMA survey of 1942, it was shown that 5,276 veterinarians in the United States were above 50 years of age. This was 46 per cent. By the end of the period year 1949, shown in the table herein, 2,232 will approach 50 years of age. Probably a greater portion of that number will actually fall within the 50-60 group. Thus at that time, approximately 7,500 or slightly better than half of those who were living in 1942, will be in the age group beyond 50 years. It does not require much imagination to picture the effects of death and retirements on this group. The critical years will be 1947 and

1948, during which time the numbers to be graduated will scarcely balance those lost by death alone.

During those two years, much the same situation may prevail as that during 1944-1946, when there were many calls for veterinarians which could not be filled.

To those who consider the needs for veterinary service, there will readily appear that within a period of but a few years, 1944-1948, a great need for veterinarians has existed, and will continue to exist. The critical factor is that during such periods many possible veterinary needs may be unfilled, many may learn to get along without veterinary service, substitutes for veterinary service may be found, proprietary remedies and drug store and feed store competition cannot be met. Substitutes in the form of legislation may appear.

We are face to face with the hazard of legislation which may place people in line to perform such duties as have required and should require veterinarians. All these factors deserve our serious attention.

THE LIVESTOCK OWNER AND ADVERTISING

Money Spent for Advertising Animal Medication in Farm Papers During Twelve Months, 1944-45, Expressed in Dollars (material presented secured from reliable advertising agencies)

State	Laymen	Sales Policy	
		Laymen and Profession	Profession (Only)
Calif.		9,202	(1)
Colo.	6,576	(1)	
Del.			16,315 (1)
Ill.	152	(1)	
Ind.	9,764	(2)	
Iowa	156,218	(2)	1,825 (1)
Ky.	6,762	(1)	
Mich.	126	(1)	29,129 (2)
Minn.	840	(2)	
Mo.	8,812	(3)	1,071 (1) 4,383 (2)
Neb.	108,245	(2)	4,666 (1)
N. J.	4,895	(2)	2,410 (1)
N. Y.	2,952	(1)	134,446 (2)
Ohio	99,073	(2)	
Pa.	59,331	(1)	
Texas	7,045	(2)	
Wash.	539	(1)	
Wis.	3,050	(1)	

Note—The number in parentheses indicates the number of firms.

Studies of monies spent for advertising over a twelve month period by firms with marketing policies, as indicated in the above table, impress one with the stupendous effort being made to put questionable remedies in the hands of the livestock owner, and with the profit which must be made on such remedies to finance advertising alone by such firms.

FUTURE WORK OF THE COMMITTEE

Should there be a period of internship? The Committee is impressed by the expression it has received with respect to the problem of recently graduated veterinarians entering practice. The Committee is, at this time, pondering whether it should suggest in the several state examining boards that they establish a date, some several years in the future, beyond which all recent graduates will be required to show that they have had at least one year of internship, as one of the requirements of the examining board for being granted a license to practice.

The Committee should study possibilities of closer liaison between state experiment station

veterinarians, sanitary officials, and practitioners in the control of animal disease.

Public health work is offering to properly qualified veterinarians opportunity in that field. The need is to provide proper training for this type of work. Many colleges offer some work in milk and food hygiene, but it seems there is considerable need for expanding this training beyond the minimum requirement for the professional degree.

The Committee here wants to make the observation that, as in the case of the employment of practicing veterinarians to participate in public disease-control projects, there are reforms which, however needful they may be, may not be sufficiently apparent to the layman, and hence may not be immediately embraced. Yet, attempts to bring about these reforms should not be abandoned. On the other hand, they should be pursued indefatigably and along educational lines.

Needful as are the reforms which we have suggested, namely: the employment of practicing veterinarians in public disease-control projects, the institution of veterinary municipal meat inspection, and a rational system of internship for recent graduates, it is doubtful if these would have, or will, come into fruition unless some purposeful committee pursues these objectives and continues to represent them.

The distribution of veterinarians to maintain complete veterinary service, the extension of the field of usefulness of veterinary service, and the effect of changing economic conditions upon these two problems, justify continuous study by the American Veterinary Medical Association. It is therefore recommended that a standing committee on veterinary service be established. It is recommended that the committee be composed of three members—one representing education, one federal or state control forces, and one the practitioners; that their terms of office extend over a period of three years with staggered periods of terminations; and that members be appointed by the president.

If the recommendation to create a committee on veterinary service is approved, it is recommended that it take over the functions of the Special Committee on Postwar Planning and that the latter be discharged.

SUMMARY

1) Brief reference was made to the work of the Committee in animal disease-control projects and municipal meat inspection.

2) Procurement and assignment committees have indicated willingness to assist with the establishment of a more complete veterinary service.

3) In a report of a survey of the type of service now available by extensions veterinarians to practicing veterinarians, the need for a public relations officer for veterinarians is stressed.

4) A study of replies to a letter on encroachments forcibly stresses the need for veterinarians and raises the question in regard to what action should be taken and who should be responsible for taking such action as is deemed needed.

5) A study of the number of veterinarians now active and prospectively to be active up to, and including the year, 1949 points out the need for awareness of possible encroachments which may appear during this period.

6) A survey of certain sums of money spent for advertising farm and animal remedies makes evident:

(a) A type of activity which means encroachment upon professional veterinary medicine, and

(b) The profit, from remedies often worthless, needed to finance such activity.

7) Possible future work of the Committee was briefly outlined with the recommendation that a new standing committee on veterinary service be established which would take over the work of the Special Committee on Postwar Planning.

s/H. L. FOUST, Chairman
 J. A. BARGER CHAS. A. MITCHELL
 COL SETH C. DILDINE W. H. RISER
 KENNETH G. MCKAY J. ALLYN ROGERS

Motion Picture Library

Only recently has postwar motion picture film been made available in sufficient quantities for non-military uses to enable your committee on motion picture library to start development of any further projects.

Three new film copies have been ordered during April of this year and will soon be added to the library. The names of these films are:

1) "Meats with Approval", put out by United States Department of Agriculture, Meat Inspection Division. It will be of interest to both lay and professional groups.

2) "Gastric Fistula Technique and the Interior of the Bovine Stomach", by Dr. A. F. Shalk, professor in the Department of Veterinary Preventive Medicine, The Ohio State University.

3) "The Ruminant Stomach", by Dr. H. H. Dukes, New York State Veterinary college, Cornell University, Ithaca, New York.

About April 1, arrangements were made by your committee with Ideal Pictures Corporation, 34 E. 8th St., Chicago, Ill., which is located about three blocks from our American Veterinary Medical Association offices, to store, process, check in, and check out film to different veterinary groups and to make copies of existing films.

Ideal Pictures Corporation, incidentally, handles the motion picture library for the American Medical Association, a listing of which may be secured through the AVMA office. Through this company, your committee has made arrangements to have a few privately owned, silent films copied with new sound sidefilm track attached, which will replace the silent editing, or in most cases, no editing at all. The owner of the proposed privately owned, silent film writes out a description of the film as it is normally projected on a screen in his home. This written description, along with film, is mailed to the AVMA office for previewing. We will have sound track made and attached to original film and a copy of this made for our library. The original film, plus sound track, will be mailed back to the original owner.

Your committee believes that there are many privately owned 16-mm. films in existence and many now in the process of being made that with the addition of proper sound track editing would make valuable additions to our library.

Any veterinarian having 16-mm. motion picture films dealing with veterinary subjects is hereby invited to send film, plus a written narration on the film, to the AVMA office in Chicago for previewing by your committee. Your film will have the best of care while in our possession. Making copies of film will require them to be held out of circulation for about sixty days. The voice on the sound track of the film will be that of a professional, motion picture film narrator.

Your committee feels that much progress will be made in the coming year toward establishing a better motion picture library. Therefore, we respectfully recommend:

- 1) That the special committee on motion picture library be continued.
- 2) That additional appropriations be made available for the further development of a motion picture library.

s/ C. B. KRONE, Chairman
 A. G. BOYD J. R. DINSMORE
 A. G. DANKS W. C. GLENNEY

National Board of Veterinary Examiners

The report of the Committee on National Board of Veterinary Examiners presented at the eighty-first annual meeting of the American Veterinary Medical Association is still awaiting final action. Your committee feels that before it should continue further in its deliberation, we must know what disposition the Association makes of that report.

WALTER R. KRILL, Chairman
 GEORGE BLANCHE L. A. MERILLAT
 R. A. KELSER A. W. MILLER

Joint Committee on Foods—AVMA and AAHA

The Committee has held two meetings since 1945 business session of the AVMA, at which time the annual report was adopted by the AVMA House of Representatives and by the Executive Board of the AAHA. That report included a proposed revised program of testing dog foods for the "Seal of Approval" of the Joint Committee. (See the JOURNAL, November, 1945, pp. 370-373.)

Following adoption of the report, the Committee met in New York on Oct. 5, 1945, for the purpose of implementing the new program. The necessary application and report forms and details of the required tests were drafted. The Committee also provided for the annual election of a chairman and a secretary and Drs. S. W. Halgler and J. G. Hardenbergh, respectively, were duly elected to these offices for the year 1945-46. The term of the latter as one of the representatives of the AVMA expires this year.

At this meeting, it was tentatively arranged to retain Dr. Milton W. Taylor, associate professor of agricultural biochemistry and associate biochemist in nutrition at Rutgers University, as technical consultant to the Committee. In this capacity, Dr. Taylor will review the various chemical and biologic analyses of dog foods which are submitted for the seal and will advise the Committee as to their acceptability and on all other technical matters in the testing work.

The second meeting of the Committee was held in New York on April 15, 1946, prior to the annual session of the AAHA. A tentative list of testing laboratories, which are equipped and qualified to conduct the required biologic and chemical analyses of dog foods submitted for the Seal of Approval, was developed. Arrangements were made to investigate a considerable number of laboratories which are interested in this type of work.

An informal report from the treasurer, Dr. A. R. Theobald, showed a cash balance of \$4,510.38 on hand as of April 10, 1946. A motion was adopted to establish the fiscal year of July 1 to June 30, inclusive, and to instruct the treasurer to have an official audit made each year as of the latter date. (This official audit report will be appended when it becomes available, since this report is being written as of May 1 for submission to the AVMA central office.)

The secretary was authorized to mail a copy of the printed pamphlet containing full details of the revised testing program to some 1,500 veterinarians who are especially interested in small animal practice and in canine nutrition. Copies of the pamphlet are available on request to any interested veterinarian from the office of the committee secretary at 600 South Michigan Avenue, Chicago 5, Illinois.

At the time of filing this report (May 1), there are only two dog foods bearing the temporary wartime statement of acceptance by the committee. These are "GroPup" manufactured by the Kellogg Company, Battle Creek, Michigan, and "Friskies," manufactured by Albers Milling Company, Seattle, Washington, a subsidiary of the Carnation Company. The Committee has inquiries from 12 other manufacturers who have expressed a desire to place their foods under test for the regular Seal of Approval which will be granted again to foods which meet the requirements specified for either a "complete" or "maintenance" ration.

However, the general feed situation is now more critical than at any time during the war. The supplies of quality ingredients, especially proteins, necessary to the manufacture of high quality dog foods are scarce. The committee feels, therefore, that any considerable expansion of its activities under the revised program cannot be expected for perhaps another year, or until the present critical feed situation is relieved. The Committee's approval will be given only to those dog foods which fully meet the high standards that have been adopted by the committee members in representing their respective associations.

s/ S. W. HAIGLER, Chairman
 L. A. CORWIN J. G. HARDENBERGH
 J. B. ENGLE A. E. WIGHT

Research Council

A meeting of the Research Council was held in Chicago on the evening of Dec. 4, 1945. Nine members and four visitors were present. Dr. W. A. Hagan spoke before the Council on AVMA Research Fund which it is proposed to raise. The committee charged with obtaining contributions to this fund is composed of Dr. J. V. Lacroix, chairman; Dr. W. A. Hagan; and Dr. C. C. Hastings.

Dr. Hardenbergh complimented the Research Council on its editorial work in connection with the RESEARCH JOURNAL. He said that the editors have found this phase of the Council's work to be very helpful.

Dr. Hardenbergh spoke briefly on science legislation now pending in Congress. Dr. Dukes reported on his trip to Washington in November to present to a Senate subcommittee a statement for the AVMA, setting forth views on the national science legislation. For the statement prepared by Dr. Dukes, see: Hearings on Science Legislation (S. 1297 and Related Bills), Part 5, Including Statements Submitted for the Record. November 1 and 2, 1945, p. 1166. Government Printing Office, Washington, 1946. Dr. Dukes pointed out in his statement that the AVMA Research Council could be of great assistance in activating a program of federal aid to research and education in the veterinary sciences.

The obtaining of funds from manufacturers of penicillin for research work on the use of penicillin in veterinary medicine was discussed by the Council.

The method of handling applications for research fellowships was discussed. It was emphasized that the present method is too slow

and that a faster procedure should be worked out as soon as possible. It was suggested that an annual spring meeting of the Committee on Fellowships would be desirable.

A report to the Council from Dr. L. Meyer Jones, who held the Merck fellowship of the Research Council, was read by the secretary.

Election of officers of the Council took place. All of the officers were reelected: Dr. E. T. Hallman, chairman; Dr. R. A. Kelser, vice-chairman; Dr. H. H. Dukes, secretary.

Information that has reached the Council up to the time of making this report (May 1) has indicated that the campaign to raise an AVMA Research Fund is meeting with success. It is gratifying to report that the number of young veterinarians who have expressed interest in obtaining Veterinary Research Fellowships has shown a definite increase. Several completed applications are now on hand. It is expected that the Committee on Fellowships will meet soon.

s/H. H. DUKES

Enforcement of Code of Ethics

It was not possible for this committee to hold a meeting during the year, but considerable correspondence was carried on among the members.

The Committee feels that while the Code of Ethics of the AVMA is well written and covers the field fairly thoroughly, there are some sections that need clarification. For example, paragraph 21 states: "Display signs of reasonable size and dimensions on veterinary hospitals are not regarded as objectionable, etc." The question arises, what is reasonable? And, there are many conflicting opinions as to what is a reasonable size. If it is not feasible to designate a maximum size in all cases, it may be possible to work out a formula for a size comparable to the size of the hospital building.

From information obtained and from observations, the Committee feels that there are widespread violations of the Code of Ethics throughout the land and makes the following recommendations.

1) That a concerted effort be made by the AVMA to publicize the Code of Ethics to members of the profession and to emphasize the necessity of conformance.

2) That machinery be set up for enforcement of the Code of Ethics, and for punishment for violation thereof.

3) The Committee suggests that each constituent organization within the AVMA adopt the Code of Ethics of the AVMA or one that is acceptable to the national committee on ethics. This should be done as soon after the 1946 annual meeting as their by-laws will permit.

4) That each constituent organization elect or appoint a committee on ethics to work in conjunction with, and through which the national committee could function, to reach their membership. That these committees be standing committees, and the personnel be as permanent as it is feasible to make it. This also to be done as soon after the 1946 annual meeting as possible.

5) That each constituent organization give notice in writing to its members to abide by the adopted code. This notice should be mailed to members during the year following the 1946 annual meeting. One year from the time notices are sent out, each member should be required to abide fully by the adopted code or relinquish membership in his particular organization. The committee on ethics or secretary of the constituent organization would report

violations to the AVMA Committee on Enforcement of Code of Ethics. Violations may also be reported by any AVMA member in good standing or member of a constituent association in which the violation has occurred.

6) At the time the constituent organizations are sending out notices to their members, the AVMA should do likewise through its committee on enforcement of ethics, in order to make the movement one of national scope and to assist the constituent committees in bringing about results.

7) One year after notices have been sent out by the constituent organizations and the AVMA, action should be taken by the national organization to correct any violation of the Code of Ethics.

8) In the event that the national committee finds that the Code of Ethics has been violated, no matter in what field of ethics that violation may occur, it should immediately contact the constituent committee on ethics within whose jurisdiction the violation has occurred and get a written report regarding the violation, after the said committee has had time to investigate the violation. The constituent committee in turn will be requested to have the individual correct the violation or take such steps as it feels are necessary under the circumstances and again return its findings and suggestions to the national committee. The national committee, after reviewing the case, might consider the matter closed satisfactorily or may, in turn, want to take further action, in which case all facts and findings will be given to the Executive Board of the AVMA for final action.

9) It is further suggested that the AVMA and the various constituent committees on enforcement of ethics work in close cooperation with various veterinary examining boards. While to be expelled from membership in one's state, provincial, territorial, or national association may seem drastic punishment, this committee does not believe it severe enough to stop some veterinarians from conducting an unethical practice. If a means can be devised so that the offending veterinarian would be in danger of losing his right to practice, we believe the Code of Ethics could be enforced.

s/ S. W. HAIGLER, Chairman

ALBERT A. MERRILL RAYMOND C. SNYDER

Representatives

Representative to the Horse and Mule Association of America

The twenty-sixth annual meeting of the Horse and Mule Association of America was held on Dec. 5, 1945, at the Palmer House in Chicago.

For more than a quarter of a century this organization has been working untiringly for the cause of the horse and the mule, to promote them and to educate the public to the use of these animals—how to ride, how to work, how to care for them.

This year, as in previous years, noted horsemen and veterinarians appeared on the program, namely, such outstanding men as General Kelser, who gave an address on the subject "Periodic Ophthalmia, Its Cause and Prevention." Other noted men in the breeding fraternity met and exchanged ideas on the care and management of horses and mules. As in the past, many subjects were discussed and many copies of addresses of these men have been mailed to all members, as well as to many outsiders.

Numerous booklets have been mailed out on

horse judging, management, care and feeding, disease prevention; also one on jacks, jennets and mules, and others on riding and bridle trails.

The Association has advanced this year, as during previous years. Nationwide campaigns have been carried out to obtain facts about horse and mule production and their use in every county in the United States. Its distribution of literature is one of the most complete of any organization in the country. Booklets were sent to every teacher of vocational agriculture in the United States.

This Association sponsors every breed of horse. Many new light breed associations and registries have sprung up within the last few years.

At the present time, work horses and mules are selling below cost of production in many places. This is not unusual. Many times we have seen cattle and hogs sell below the cost of production. This can happen again with other livestock as well as horses. When we are over-produced on one line, it will slow up production in that line and the supply and demand will control the prices. On the other hand, never in the history of the country has there been as much interest in the riding horse as there has been in the past year. It promises to be even greater in the coming year. There are more inquiries for that type of horse and a greater demand throughout the nation.

Our spring stallion and jack shows were exceptionally good this year, with many fine animals showing in Indiana. Great interest is being taken in mule breeding. Your reporter judged both the district and state jack shows.

Our Indiana saddle horse show, the American Legion benefit show, will be held again this year in the Coliseum at the Fairgrounds, Indianapolis, on May 17, 18, and 19. Many horses from all over the United States are entered in this show. The show last year netted the Legion \$14,000.

This report is called for before the time when our good horse shows get under way, but already many light horse shows are planned throughout the country. The opening of our state fairs in the horse breeding centers will do much to increase horse interest.

The Horse and Mule Association is working hard to keep up horse interests and deserves great credit for the untiring effort.

s/T. A. SIGLER

Representative to American Association for the Advancement of Science

The first postwar general meeting of the A. A. S. was held March 27-30, 1946, in St. Louis. The next meeting is to be held in December at Boston. The meeting was held under difficulties in a crowded city with a curtailed enrollment of about 2,300. Notices had to be sent to 800 not to come to St. Louis because of lack of facilities. The eminent physiologist, Anton J. Carlson, emeritus professor at the University of Chicago, gave the retiring presidential address on "Be There a Standard to Which the Wise and the Honest Can Repair?"

At the meeting the Association, in cooperation with the Westinghouse Educational Foundation, awarded medals and certificates to thirteen newspaper writers who have pioneered in the difficult task of reporting scientific events and developments. How to transmit scientific fact and theory to the press:

"Too commonly, scientists forget the problems

connected with this first step because of their concern with the second question—how the scientific material will be transmitted to the public. It is here that most of the misunderstandings originate and most of the irritations develop. Scientists, however, are unable to spread their achievements directly before the public; they must use the press, and their work must filter through the hands of human—and fallible—reporters with varying degrees of knowledge and experience in science reporting. Be it said at once that the science writers who were honored at Saint Louis, and others who may be honored in the future, know their way around in the fields of science and technology. They have adopted as their own the standards of accuracy and intellectual integrity which motivate and guide the scientists. They do, however, have a different objective; whereas the researcher wants a result, the reporter wants a story. The result and the story may not be identical, though both must make use of the same facts.

"The facts are the basic ingredients for which the scientist is responsible, and the method of getting them to representatives of the press is direct and simple. Reporters prefer to work from a written manuscript because it frees them from the hazards of error involved in reporting an oral presentation or an interview. Few of us realize the punishment which science writers inflict upon themselves reading science in manuscript in an effort to get and to check facts. At Saint Louis, their most serious complaint was the dearth of manuscripts; and, in a week of good reporting, the best coverage was given those papers whose authors submitted advance copies to the press room. The reporters wanted to cover everything, but attendance at a score or more of simultaneous sessions or interviewing more than 1,000 authors presented insoluble problems, to which manuscript copies of addresses in the press room would have provided the only answer."

Section N (medical sciences) held a symposium on "Medical Science and Industry." One topic was "Atomic Energy" with reference to hazards of production to man and to therapeutic uses of P32. The report was encouraging in the treatment of certain blood diseases. It was suggested that C14 and similar compounds be investigated.

Attempts to secure objective data by animal experimentation on the etiological relationships of trauma to disease (cancer for instance) were reported as unsatisfactory. As a result of researches on war gases, new methods of treating heavy metal poisoning, certain diseases of the blood, and edema of the lungs were developed. There was evidence that phosgene gave temporary relief in Hodgkin's disease and that PF3 had value in the treatment of glaucoma.

Section E (agriculture) conducted a symposium on the relation of soils to plants, animals, and people. Dr. C. F. Hoffman, Michigan State College, discussed "Nutritional Deficiencies in Farm Animals in Relation to Soil and Plant Composition." Further reports were made on iron porphyrin proteins in biological oxidations, the rôle of nonporphyrin iron and of magnesium in fermentation, the functions of hemoglobin iron, hemocyanin copper, and zinc in carbonic anhydrase in the transport and exchange of carbon dioxide and oxygen. Paul R. White, Institute of Cancer Research, reported on a crit-

ical study of techniques for investigating the nutrition of excised tissues.

s/WARD GILTNER

Representative to Association of Honorary Consultants, Army Medical Library

The second annual meeting of the consultants was held in Cleveland, October 5-6, 1945. The following officers were elected for the ensuing year: Dr. John F. Fulton, Yale Medical School, president (re-elected); Dr. Chauncey D. Leake, University of Texas, School of Medicine, vice-president; Col. Harold W. Jones, secretary-treasurer (re-elected). Action to be taken by Congress on the appropriation for a new library building was discussed. This building was one of the essentials recommended by the survey committee in 1944. A request for funds was included in the War Department estimate for the fiscal year of 1947. The architect's plans call for an estimated expenditure of \$10,000,000. senators and Congressmen have recently been urged to support this much-needed development.

An advisory editorial board on the history of the Medical Department of World War II has been established in the Office of the Surgeon General. Consultants serving on the board include Brig. Gen. R. A. Kelser, Veterinary Corps, U.S.A., Ret., Dr. Morris Fishbein, Dr. J. Ben Robinson, and Dr. Lewis H. Weed. The Medical Department history is now in preparation and plans call for one volume of it to be devoted to the history of the Veterinary Corps.

Col. Harold W. Jones, M.C., was retired from active duty on January 1, 1946, and Col. Leon L. Gardner, M.C., was named by the Surgeon General as director of the Army Medical Library to replace him. Colonel Jones was awarded the Legion of Merit on Dec. 20, 1945, the citation reading in part: "Under his able guidance and leadership, the Library was developed into a source of information for the entire medical profession and was raised to the high place it now occupies . . . as one of the foremost collections of medical literature in the world . . ."

Over \$43,000 was expended during the year on new books. The total number of purchases increased from 4,679 in 1944 to 8,605 in 1945.

I would like again to call the attention of all veterinarians and veterinary institutions to the need of the Army Medical Library for books of importance to the history of veterinary medicine. The library's present holding of such books is poor. Any one who has books in this field is urged to offer them as gifts to the library. These offers should be in the form of lists of material available from prospective donors so that the library may choose the items offered in order to avoid duplication. Lists of offered titles should be addressed to Mr. Wyllis Eaton Wright, Librarian, Army Medical Library, 7th Street and Independence Avenue, S.W., Washington 25, D. C.

Attention is again invited to the services which the Army Medical Library offers to all persons in the medical fields. These include reference and bibliographic, research, microfilm, and other types of library help which cannot be duplicated elsewhere. If the veterinary aspects of the library work are to be developed, individual and collective interest and support from the veterinary profession must be forthcoming each year. The potential value and usefulness of this center of medical library work to veterinary medicine in the United States are great.

s/J. G. HARDENBERGH

Representative to the Inter-Association Council on Animal Disease and Production

The Council has not met during the past year, but there has been correspondence between the members.

The members of the Council voted to grant permission to the National Committee on Boys and Girls Club Work to distribute, free of charge, approximately 20,000 copies of the circular "Raise Profitable Sheep."

The program "Protecting and Promoting the Welfare of the Livestock Industry" was approved by the United States Livestock Sanitary Association, but no steps have been taken to activate the program.

The secretary to the Council has suggested that the members carefully consider whether or not it has potential functions which are not currently being covered by other organizations.

s/R. C. KLUSSENDORF

Representative to National Livestock Conservation Program

The work of this group, which was organized primarily to meet wartime needs, has been largely discontinued on the basis of its original program. An educational program on livestock conservation is being conducted as part of the 4-H Club work of the National Committee on Boys and Girls Clubs under the direction of Mr. Guy Noble and Mr. G. A. McDonald.

No meetings of the executive committee of this program have been held during the past year.

s/J. G. HARDENBERGH

Representative to the National Live Stock Loss Prevention Board

On February 7, 1946, I attended the Eleventh Annual Meeting of the National Live Stock Loss Prevention Board in Chicago. Some of the noteworthy actions at this meeting were as follows:

Changing of the constitution to enable it to better handle the present-day tasks.

The manager of the group, Professor H. R. Smith, gave an overall picture of what had been done to coordinate the general efforts of the forty-three companies, firms, and societies which constitute the Board. The professor also gave many specific incidents of measures which had been instituted to prevent losses.

Following Professor Smith in similar trends were Mr. Harry J. Boyts, Sioux City Live Stock Commissioner, Dr. W. T. Spencer, Omaha Live Stock Commissioner, Mr. Ray Cuff, Kansas City Live Stock Commissioner, and Mr. W. A. Peck, St. Paul Live Stock Commissioner, all regional managers of the Board.

From these discussions, it was evident that much had been done through educational processes in the control of sheep parasites and cattle grub. However, the primary purpose of the Board continues to be the prevention of loss incident to the handling of livestock in transit and at the slaughtering places. This loss ranges all the way from animals that are killed to those only slightly bruised. The losses, it was shown, are considerably more when the stock has been shipped by truck than by rail.

The losses throughout the past several years have decreased as a result of better handling methods recommended by the managers of this Board, but the losses are still far above what should reasonably be expected.

Arrangements have been made for recording

and tabulating the various kinds and degrees of losses incident to stock moving to market. This is for the purpose of getting at the problem more specifically. However, it is evident that overloading and rough handling are responsible for the major part of the losses.

The Board approved the so-called All-Pullet Flock Program and took note of the fact that this plan should result in a reduction in the percentage of tuberculous hogs in the future. At this time, as high as 14 per cent of the hogs slaughtered at some of the markets in the Cornbelt are retained for tuberculosis.

Forty-three different groups contributed a total of \$8,800.00 for the support of the Board during 1945 and 1946. Some of these funds were marked for specific projects, such as cattle grub control and surveys at stockyards.

Dr. W. A. Young, Managing Director of The Anti-Cruelty Society, Chicago, was elected president. Dr. H. Preston Hoskins, of the *North American Veterinarian*, was reelected secretary, and Mr. Charles McNeil, of the Northwestern Railway Company, was reelected treasurer.

s/J. A. BARGER

Representative to the Division of Biology and Agriculture of the National Research Council

The annual meeting of the Division of Biology and Agriculture of the National Research Council on April 13, 1946, was attended. After some discussion of the Science Bill, Dr. D. W. Brouk outlined a proposed American Institute of Biology. Following this, a motion was passed asking each man in attendance to present to his society or association the request that a representative be appointed to meet and discuss this proposed institute.

Two additional meetings sponsored by the National Research Council were attended. One on Jan. 14, 1946, was of the Agricultural Board of the division. Your representative explained briefly to this board the proposed Research Fund of the American Veterinary Medical Association. Several members complimented the veterinary profession on this program.

The other meeting was called April 25, 1946, to discuss resumption of international congresses. Dr. John R. Mohler represented the International Veterinary Congress. All interested organizations were advised that very little beyond tentative planning could be done at present.

s/B. T. SIMMS

Representative to the Division of Medical Sciences of the National Research Council

The American Veterinary Medical Association's representative to the National Research Council, National Academy of Sciences, attended a meeting of the Division of the Medical Sciences in Washington on April 27, 1946. This was the first meeting embracing a full membership of the Division since the early years of the war.

Dr. Lewis H. Weed, chairman of the Division, reviewed the activities for the past year and an impressive list of important projects was recounted. Those worthy of special mention included the selection of Fellows for graduate training in research; investigations of the problems of sex; endocrinology; growth, including basic problems pertaining to cancer; and a survey by the wartime Committee on Pathology made at the request of the Surgeon General of the Army.

In addition, the Division of the Medical Sciences has acted in an advisory capacity to many branches of the Armed Services who have requested technical assistance on a large variety of special projects. The Division has also assumed the sponsorship of new fellowships in pediatrics and in orthopedics.

Another important activity has been the assistance rendered in a liaison capacity in providing for the proper allocation of grants from research funds made available for studies in special fields.

Chairmen of several of the special committees made brief reports of accomplishments. These included: Dr. Howard Karsner who reported for the wartime Committee on Pathology. The report which had been accepted by the Surgeon General of the Army provides for a new building and a reorganizational set-up for the Army Institute of Pathology and the American Registries of Pathology, and for adequate facilities for graduate training and research in pathology in the broadest definition of the word.

Other activities of the Division on which the chairmen of the respective committees reported were:

- Advisory Committee on Drug Addiction.
- Committee on Research in Endocrinology.
- Committee on Growth.
- Committee on Medical Problems of Civil Aviation.
- Committee on Research in Problems of Sex.
- War Service Committees.

It was brought out by Dr. Weed and by Dr. Geo. B. Darling, executive secretary of the National Research Council, that changing demands of peacetime will necessitate a reorganization of many of the present committees and the discontinuance of some. In addition, there is being worked out a reorganization of the functioning machinery of the National Research Council which will provide for a full-time permanent secretary. This seems a very important and long overdue improvement definitely necessary to better meet the multitudinous and complex problems which confront the Council in the demands for assistance from the Armed Services, the Public Health Service, and Industry.

It is the impression of the representative of the American Veterinary Medical Association that the National Research Council has, during the war years, provided a service of inestimable value to the medical sciences applicable to the successful prosecution of the war. A considerable portion of the products of wartime medical research are now being made available for civilian use and as a consequence science has been enriched perhaps indirectly by facts that were often by-products of the major project which had as its objective the solution of a problem primarily of military importance. The ability of the National Research Council to obtain, on a voluntary basis, the assistance of leading investigators in all fields of science and to coördinate their efforts in an effective manner establishes the Council as an extremely potent factor in the advancement of science.

Dr. Lewis H. Weed, who had given distinguished service as chairman of the Division of the Medical Sciences for the past seven years, expressed his desire to retire. A new secretary will not be selected until plans for the reorganization of the National Research Council have been perfected and approved.

The representative of the American Veterinary Medical Association was elected a member of the Executive Committee of the Division of the Medical Sciences for the ensuing year.

s/WM. H. FELDMAN

Representative to United States Pharmacopoeial Convention

The U. S. Pharmacopoeial Convention did not hold a meeting during the past year, and therefore your delegate has no official report to submit.

s/H. E. MOSKEY

Representative to National Society for Medical Research

The National Society for Medical Research, a clearing house for information on medical studies and discoveries, was organized early in 1946 under the sponsorship of the Association of American Medical Colleges with the coöperation of 101 national scientific organizations. The AVMA was invited to become one of the charter organization members. Dr. A. C. Ivy, head of the department of physiology at Northwestern University and secretary-treasurer of the new society, met with the Board of Governors on March 2, 1946, and explained the purpose of the organization which is "the advancement of research in medicine, biology, pharmacy, dentistry and veterinary medicine." A positive program is to be organized to inform the public regarding the necessity, humane character, and accomplishments of animal experimentation and to analyze and expose the propaganda of small but highly vocal groups which object to the use of animals in furthering medical knowledge.

The Board of Governors decided to accept the invitation for the AVMA to join and designated the undersigned to represent the AVMA.

Dr. Anton J. Carlson, professor emeritus of physiology at the University of Chicago, is president of the new organization. On the board of directors are R. B. Allen, University of Illinois; Alfred Blalock, Johns Hopkins University; C. S. Burwell, Harvard University; E. J. Carey, Marquette University; L. R. Chandler, Stanford University; W. C. Davidson, Duke University; R. E. Dyer, National Institute of Health; H. S. Gasser, Rockefeller Institute; E. W. Goodpasture, Vanderbilt University; Victor Johnson, American Medical Association; C. R. Leake, University of Texas; E. M. MacEwen, University of Iowa; W. S. McEllroy, University of Pittsburgh; B. O. Raulston, University of Southern California; A. M. Schwitalla, St. Louis University; Isaac Starr, University of Pennsylvania; E. L. Turner, University of Washington; Floyd S. Winslow, New York State Medical Society; and J. G. Hardenbergh, executive secretary, AVMA.

Ralph A. Rohweder, 1946 president of the Chicago Junior Association of Commerce and former consultant and editor for the National Safety Council, has been appointed executive secretary. Headquarters have been established at 25 East Washington St., Chicago.

The financial support for the National Society for Medical Research will be obtained through contributions from member organizations and other sources. Every year doctors and research workers must take time from their vital duties to defeat legislation proposed by various groups which would hamper or stop the work of those in all fields of medicine. It is high time that a concerted effort be made to give the public facts rather than distorted ideas about experimental work on animals by qualified investigators. It is believed that the newly formed society will be able to function effectively to this end.

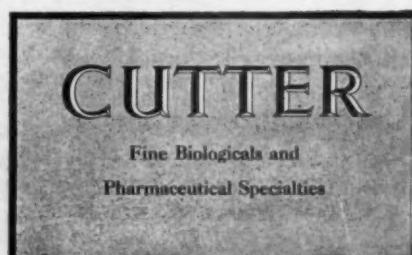
s/J. G. HARDENBERGH



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An' Related Topics



Old Fashioned? He Likes It that Way
A farmer in Iowa—Melvin Lundberg—uses a 5-horse team to disk and condition cane stubble ground.
He has a tractor on his 120-acre farm, but he prefers to use horses.

Our Hunger for Books

It was hard to believe and surprising to learn from a gripping book reviewer just the other day that there were more books published in France in 1945 than in the United States. Great Britain, Sweden, or Switzerland, proportionately considered, also stopped us in that respect. But, shudder not, my friends, until someone counts the ems American people read in the deluge of good magazines. Not a few of the books counted were doubtless the paper-covered throw aways like our tonnage of printed pages. Few good books ever go stale anywhere; poor ones waste a lot of the people's time. The anorexia may be a blessing. The many hours of good fishing I've lost wading through pages of trash can never be retrieved and there are not too many

hours in a lifetime. The eight bits you tossed away on a lousy book is nothing compared with the time it stole. A good way is to wait 'til a book makes a reputation and then eat it up.

Ropy Milk

Milk that pulls out into ropes or strings is made to act in this way by certain bacteria commonly found in stagnant water, says W. W. Yapp, Urbana, Ill. Cows standing in shallow pools of water to keep cool pick up the bacteria on the teats and udders. Once the bacteria get into the milking utensils they can be removed only by thorough sterilization. This indicates that correcting the trouble after it has appeared means keeping the cows out of stagnant water and also sterilizing all contaminated equipment.

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*CAUTION: Once in solution, however, penicillin requires refrigeration.



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Be Kind to Rats

The height of emotional devotion to animals is expressed in a pamphlet published by an animal welfare society in London (*Vet. Rec.* Aug. 17, 1946) insisting on "a high standard of humaneness" in the killing of rats. Trapping, poisoning, sulfur fumigation, and viruses are invariably cruel, it says. Cyanide fumigation is the most effective and humane method of destruction, when it can be safely used. Rat-proofing buildings and eliminating breeding places are recommended as the principal deterrents for rats. In short, a "Kindness to Rats Week" expresses the general idea of human decorum in the killing of rats. It's a deuce of a job to keep man decent, isn't it?

He who goes into the "veterinary business" to launch an assault on the stock owners' pocketbook is headed for a professional life of disappointment and one that won't last, while he who steps in to do good is not going to fail. If this is preaching, turn it around and go to it.

DDT Trials

Field trials in Kansas last year showed that beef cattle treated with DDT for fly control gained at least 30 lb. per head more than did untreated controls, during the hundred-day fly period. Dairy cattle increased their milk production 15 per cent after treatment.

Dr. E. W. Laake, Dallas, Texas, estimates that 15 lb. of DDT sprayed onto animals in Kiowa County, Kan., resulted in an increase of 18,000 lb. in the amount of beef produced by the sprayed animals.

The Truth, the Whole Truth, etc.—Man has never been stricken with remorse over the sins of his fathers because true history always has been tempered to hide the bare truth from the children, who would certainly have tried to prevent the ugly events of the past from repeating themselves, had they been told the whole truth.

The taproots of our civilization are in the soil whether one lives in the city or in the open countryside.—Clinton P. Anderson, Secretary of Agriculture.

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Your Breakfast.—During the daylight hours every square yard of earth is showered with about one horse power of energy which by strokes of magic are transformed into ham and eggs via plants and animals. Simple as that. See your biochemist for details.

Maybe, It's a Fish Story.—An expert angler and tosser of flies has just told a secret that Isaac Walton didn't have. Trout bite only (or better) during the hours at which they had been fed at the hatcheries which stocked the stream. Trout, like elephants, have long memories; they don't forget the feeding schedule of the hatchery while growing from minnows to one-pounders.

Unlike the other antibiotic agents, streptomycin was not accidentally discovered or rescued from the *oubliette*, but was developed by five years of careful research among soil microbes.

The effect of war on the spread of infectious disease was shown by the incidence of bacillary dysentery in 1944 which was 60 times higher than in 1933.—*From Science Digest.*

Were an orange magnified to the size of the earth, an electron alongside (magnified accordingly) would still be invisible to the unaided eye. So, don't shift the slide around to find an electron among the worm eggs.

Juvenile delinquency got its momentum from the gangster films of the cinema and the mystery yarns of the radio which make shootings and stranglings and konklings seem to be the natural things for grown-ups to do. Children used to read of such things back of the barn if they didn't get caught. The modern way is to mold the minds of children into serene contemplation of murder, and that isn't funny.



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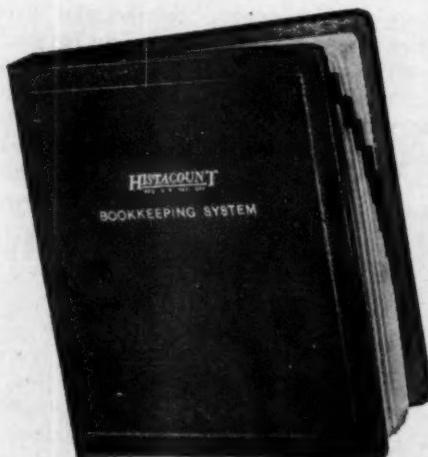
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In the heyday of German science, that is, preceding the beginning of the first world war (1914), the average age at which the doctorate degree was received at German universities was 24, or eight years sooner than in the United States, which is to say that a young German started his career at 24 and the young American at 32. Quoting Prof. S. L. Pressey, The Ohio State University (*Science*, Sept. 6, 1946), "As a result of inertia and agitation against acceleration, few students before the war moved more rapidly than the lockstep rate of a grade a year, bringing graduation at 22, or later for those destined to take graduate or professional training."

It is common knowledge that Presidents Elliot and Lowell of Harvard averred that our men have entered their life's work too old and that their training has been too long. When in 1919, this writer was charged with writing a report on the training of a veterinary officer of the French Army, for the information of the command of the A. E. F., it was found that the French youth receives his *baccalaureat* at about the same age as an American youth receives his high school diploma. As a matter of fact, all things considered, especially the consensus from the higher bracket, the American people not only lose a frank eight years of their lives but also the most creative years. When Osler wrote that men ought to retire at 40 and let youth take over, he aroused a lot of commotion 'til deeper minds confessed he was probably right. According to the thesis of Elliot, Lowell, Osler, Pressey *et al.*, education should be accelerated from 6 up, and those who can't keep pace ought to be donated to the industrial arts.

Neither the atomic bomb nor biological warfare is the most ghastly weapon invented during World War II. Chemists preconized and developed methods of destroying plant life on a large scale, i.e., a scheme to cause famine in enemy countries. As the story goes, these may now be used to destroy weeds.

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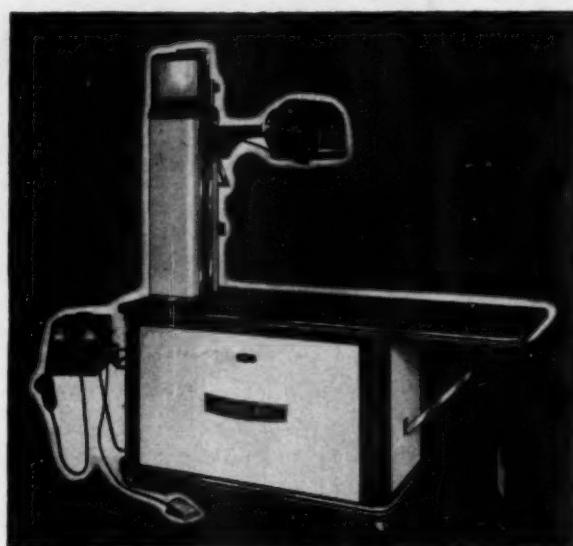
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Addiction to Demerol and Others

When men of medicine brought Paul de Kruif on the carpet for praising the virtues of demerol (*Reader's Digest*, June, 1946) as a nonhabit-forming narcotic, he found plenty of conflicting opinions in medical literature to back up his contention. His defenders have dared anyone to bring up a single authenticated case of demerol addiction (not associated with prior addiction to morphine) to support its alleged habit-forming properties. The gist adds up to the fact that there are addictions and addictions all the way from coffee to cocaine, each a separate and distinct medical problem. From what one can screen out of the published arguments, there is no more scientific basis for putting demerol under the Harrison Narcotic Act than tea or coffee or cigarettes or hard liquor, for, of the terrors of morphine addiction, it has apparently none. The one who likes a bracer of coffee in the morning or a Manhattan now and then in the evening had better watch out. "There ought to be a law" will catch him. Man can no longer be trusted to look after himself, so Uncle has to step in and save the poor drip.

The first graduate veterinarians of Illinois (we think) were W. H. Paaren of Chicago (1864) and J. H. Judson of Polo (1862).

The most devastating animal plague of American history was the sweeping visitation of equine influenza in the early 1870's.

Selection of resistant strains of birds is a new and good method of avoiding range paralysis losses.

The dispersal sales of horses and mules of the Union Armies after the Civil War spread glanders throughout the East and Middlewest and incidentally gave birth to a veterinary service.

For a period of seven months this year, the United States imported 181 billion calories (nuts, dates, figs), or the equivalent of 185 million loaves of bread.—*Pathfinder*.



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Backward People—Know Thyself

The most backward people of the Japanese Empire, if not of the whole world, are 16,000 members of the white race living on one of the northern Japanese islands. They are called the hairy Ainu and have been reported recently as that country's greatest racial problem. As the white race sprang from the area around the Caucasus Mountains, it is not clear how or when these whites got there. Maybe we came west from Japan, but that's not important. The point here is that white folks' way of life called civilization grew out of the discoveries and inventions of the darker races.

The Chinese invented porcelain, silk, spectacles, paper money, the printing press, and the compass. The Egyptians, descendants of the Negroids of central Africa, gave us copper, bronze, wheat, glass, bricks, the plow, and the idea of an alphabet. The Persians gave us chickens and pants, and the one-god philosophy of religion. From the Arabs we got advanced agriculture, veterinary medicine, purebred horses, algebra, and our system of numerals. The Chaldeans brought in the seven-day week and astronomy. From the Assyrians and Babylonians we inherited legal codes, coins, architecture, and the building trades. The Iron Age started many centuries ago in "darkest Africa." The whites cannot claim any credit for coffee, sugar, butter, corn (maize), potatoes, squash, wine, and other components of the present human dietary. The copper-skinned American gave the world tobacco and quinine, along with corn and potatoes. Livestock was brought to the white man by the brown races of central and southern Asia and not a single new species has been added during the long centuries of his alleged captaincy of all mankind. Upon these primeval achievements of the dark races the white man, mostly within the memory of living men, superimposed a pother of great inventions and industries that have him confused to the delight of the watching dark-skinned majority. Although imbued with the notion of God-given superiority over other races but without the spirit of collaboration, more than ego may be needed to worm the way out.

Now turn to your anatomy. The white race more nearly resembles the ape than

(Continued on page xxviii)



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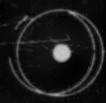
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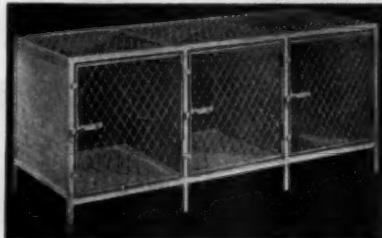


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the dark-skinned ones. The white man, like the ape, has the hairiest body, the smallest ears, the thinnest lips, and the narrowest nostrils, and, pound for pound, the smallest brains. Nearly all of the basic things we enjoy were gifts of other races. The white man has excelled in adapting and adopting, and his greatest preoccupation has been seeking destructive weapons of war and untangling the bewilderments of peace.

Naturally, we don't like this line of chatter. It's too true. Perhaps, it's the Golden Rule that was left behind. It is logical to wonder why that sacred directive was left to die on Calvary.

It took some twenty-five centuries to get into this mess (if you know what I mean) and it may take longer to wiggle out, unless Truth is employed as the pilot. That's why a dash of printer's ink may be wasted on this anthology. Note that while the white man's ambition to perfect machinery is not questioned here, world order is bankrupt and that concerns you and me, your profession and mine.

Know thyself is a mighty command but it has not been obeyed; and what's the definition of "backward people?"

Conflicting Viewpoints.—From a school history of a friendly country overseas we gleaned these gems: "The white settlers of North America drove the natives from their cornfields, gave them diseases that wiped out whole tribes and confined the survivors in concentration camps. . . The Civil War was a fight between the industrial barons of the North and the aristocratic slave owners of the South. . . Sons of the barons hired substitutes. . . Armies of the North melted away from desertions." etc., etc.

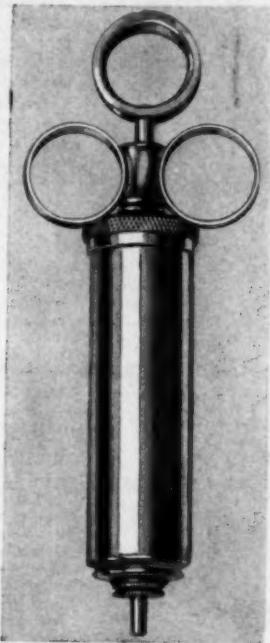
The approval of bulls on the basis of type or on production honors of daughters regardless of type, one of the lively questions of breeds' associations, will never be answered by yes or no.

It's only a short spell ago that "geriatrics" came barging into veterinary literature, and by jimminty it doesn't belong there at all. We'll have to dig up an etymon meaning something like "the old gray mare ain't what she used to be," and hook on "iatrics."

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By experienced woman veterinarian in modern, well equipped animal hospital. Address "Box Y9," c/o Journal of the AVMA.

Expectant graduate (MSC Dec., '46), single, Christian, desires a position as an assistant in practice (preferably mixed) anywhere in the United States or Canada. Address: Paul Raymond Sell, 323 Ann St., East Lansing, Mich.

Iowa State graduate to be discharged from the Army January 1, desires position in small animal hospital or mixed practice. Protestant, single. Address "Box CC," c/o Journal of the AVMA.

Wanted—Miscellaneous

Experienced veterinarian, age 27, desires mixed or small animal practice. Would prefer working for another veterinarian if it leads to lease, ownership or partnership. Address "Box HF," c/o Journal of the AVMA.

Veterinary graduate of recognized college, 30, married, available January 1, 1947, desires association with practitioner or veterinary hospital that will lead to partnership. Location unimportant. Address "Box MZ," c/o Journal of the AVMA.

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FOR SALE—Northeastern Illinois mixed practice established in same location over 35 years. Office and hospital building under transferable long time lease. Property is ideally located in central business district and, therefore, due to land valuation, is more economically operated under favorable lease than if owned. Transferable personal property includes all office and hospital furnishings, practice equipment, and drug supply.

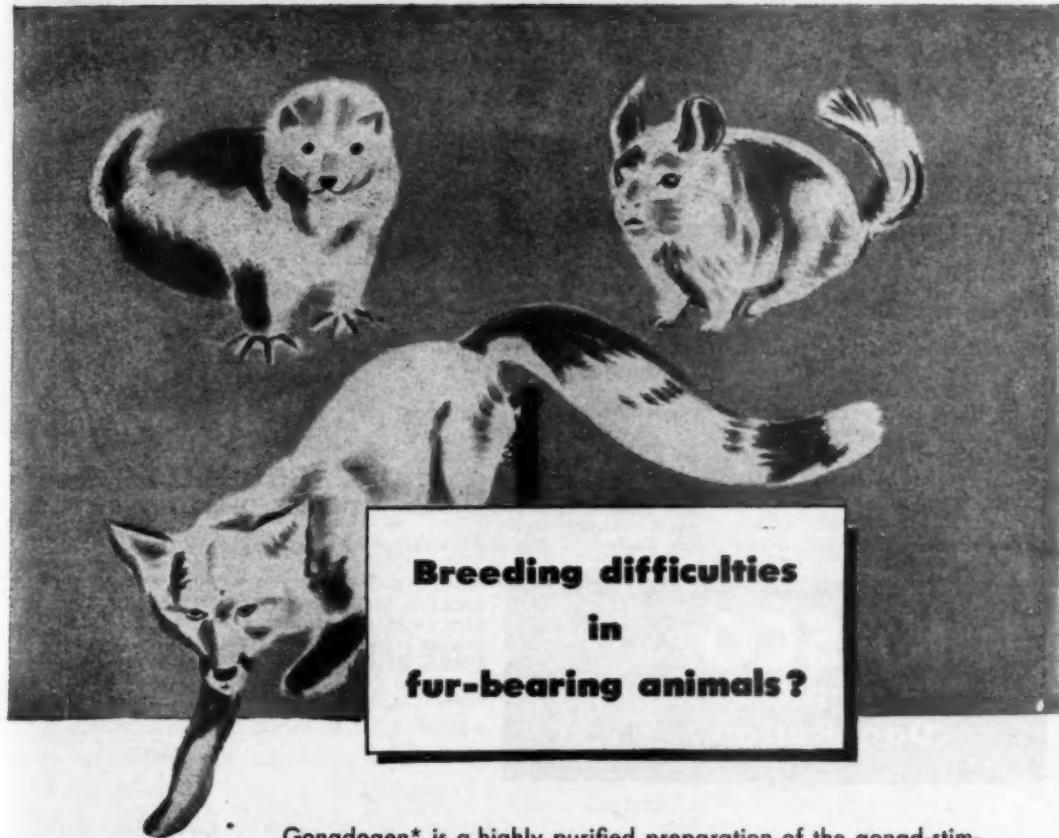
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(Continued on page xlii)



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(Continued from page xl)

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Three-fourths of the world's population does not use chairs.

George Washington recommended the founding of agricultural colleges in his first message to Congress.

Still Pitching Fast Ones.—When Dizzy Dean, former master of the mound, was reminded that "He slid into second" was not good English, he retorted "I'll learn 'em baseball and you learn 'em English."

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Animal Casualties at Bikini

Capt. H. R. Draeger, U.S.N., in charge of the goats, pigs, and rodents exposed to the two atomic bombs dropped at Bikini reported that the lethal fog of radioactive water spewed into the air over the whole area could hardly have left anyone alive on board of any of the ships used in the experiment. While some 3,000 animals were used in the bombing of July 1, only 20 pigs and 200 mice on four ships were exposed at the August demonstration. Fewer animals were used in the second demonstration because the killing mist had not been anticipated.

Whereas but few fish were killed by the first bomb, the second one killed many. Whether the shock wave that sank the ships or radiological effects killed them is not stated. While veterinary science is interested in the pathology of the killed and injured, facts in that respect do not appear in the sketchy reports. Even in other countries, protests have been registered against the use of animals for such purposes.

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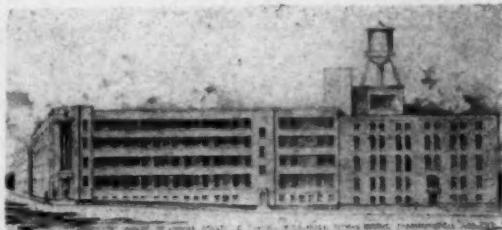
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Artist's sketch of Pitman-Moore plant as it will look after the building program now in progress is completed.

being developed at the Pitman-Moore Co. division of Allied Laboratories, Indianapolis, Ind.

One of the buildings pictured will be devoted entirely to research in antibiotic agents: penicillin, streptomycin, tyrothrinacin, and others. The work will progress as rapidly as building materials become available.

Isolationism.—Writing on the disputed question of international accord in the matter of registering Thoroughbreds, the *Horse and Hound* (London) spouts: "They [American] have their own Stud Book and can do what they like with it. Surely, we can do the same with ours." So, there.

Duckworth (*Wool Grower*, July, 1946) writes a strong message to livestock farmers and poultrymen on the importance of veterinarians to the health of man and his animals. Quoting: "Their work is directly concerned in the well being of mankind."

There are only two ways to cure a dog of the egg-eating habit: (1) Keep the dog away from eggs, and (2) keep eggs away from the dog.—E. T. Baker, Moscow, Idaho.

The man who boasts of running things about the house is probably referring to the lawn mower.

The most abnormal thing the mind can conceive is a normal man.

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Whence Came You?

In all countries in all times, army officers have been selected with great care. The lives of soldiers and survival of country are their trust. Their source does not escape the service of procurement. Perhaps, that accounts for the trouble the Pharmacy Corps is having. The pharmacists seem to be blocked by the old saw about the chain and the rotten link. From the livestock nostrum counter to a commission in the Army is a long step. To play the rôle of quack in one branch of medicine and of scientist in another—the military service—is apt to be tough going.

According to a prominent drug-trade journal that has conjured the lowest form of quackery ever known in veterinary medicine as a whale of a way to make a lot of money, the bill before Congress to create a Medical Service Corps in the Medical Department of the Army is “spite legislation trumped up to dynamite the hated Pharmacy Corps” which, obviously, the Surgeon General disapproves. Why hated? Why disapproved? The long step from

quack to officer could be the answer, for when a supposedly altruistic branch of medicine discards the badge of altruism and heads out to boast of its money-making exploitations, its standing among learned professions is doomed. Anyhow, a diploma in animal medicine based on six days of brow knitting doesn’t look too good on an application for a commission in the Army and doesn’t lift pharmacy to the lofty height it could occupy in the professional lineup. False pretense is a heavy burden.

Creep feeding of baby pigs supplements the decreasing milk supply of the sow, makes pigs more thrifty through rapid gains, enables the smaller pigs of the litter to get a better chance, permits early weaning with little shock, and decreases the incidence of injury to the pigs, says J. L. Krider, assistant professor of swine husbandry at the University of Illinois.

Experience is a fine thing, but only when we profit by it.—*T. W. Lamont.*

Standing armies would be all right if they’d only stay that way.

"SHIPPING FEVER" LOSSES CAN BE CONTROLLED

Field results, as well as extensive experimental work, show that the most efficient and practical method for preventing losses from infections incident to shipment of cattle is the administration of relatively small dosage of

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It is generally recognized that the hemorrhagic septicemia organism plays an important part in the losses incident to shipment of cattle, but many veterinary pathologists believe that a filterable virus is often the primary inciting cause of so-called "shipping fever". Because of this possibility, Lockhart Anti-Hemorrhagic Septicemia Serum is produced from mature bovines known to be immune to the various "shipping fevers". In our opinion, this "Plus Value" accounts for the superiority of the results obtained from its use.

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